WESTERN ENGINEERING

VOLUME 2

January
to June
1913

Western Engineering
420 Market Street San Francisco, Cal.

Generated on 2024-09-30 00:08 GMT / https://hdl.handle.net/2027/uiug.30112007837781
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN

620.5
WE
v.2
cop.3

INDEX

A

Page.

Agricultural machinery and free-duty law in Republic of Panama 294
Air-discharge of compressors, measuring —E. A. Fessenden 313
Lift pumping 502
Alameda, California 79, 253
Alaska coal-land matters 9
Alternating current mechanically illustrated, revolving field of 330
Alturas, California 164
Aluminum alloy, sonorous for production of house door-bells 246
Mixture 416
Amador Central, valuation of 250
Amendment to sundry civil bill, providing for federal government exhibit at Panama-Pacific Exposition 180
American Diesel engine 431
Politics and Europe 265
River bridge and concrete 345
American Dredging Co. 84
American Gasoline Co. 83, 340
American-Hawaiian Steamship Co. 253
American Institute of Electrical Engineers' proceedings, April 1913 348
American Oil & Refining Co. 82
American River Electric Co. 75, 242
American Sugar Co. 77
Anderson & Bella Vista railroad 337
Annex Water Co. 507
Arbuckle, California 77
Arizona, Chandler 507
Globe 508
Phoenix 253
Army Engineers on the San Francisco water situation, Board of 181
Arnold, Bion J., and 'commuter area'.... 94
Arnold transportation report 295
Aronson-Gale Co. 77
Arrowhead Reservoir & Power Co. 248
Asiatic Petroleum Co. 83
Associated Gas & Electric Co. 160
Associated Oil Co. 256, 340
Atlas Engine Co. at Indianapolis, Diesel-type engine 431
Auburn, California 83, 338
Augusta-Aiken Railway & Electric Corporation 160
Au Sable Electric Co., Michigan 195
Automobile and price of gasoline 431
Award of John Fritz medal to Robert W. Hunt 89
Ayres, E. F.—Road drag 472

B

Baccus, William J.—Oakland street improvements for 1912 201
Bakersfield, California 340
Balfour-Guthrie Investment Co. 336
Barber Asphalt Co. of California...29, 78, 504
Bartelsville, Oklahoma 425
Bates & Chesebrough line withdrawn.... 94
Beach Consolidated Gas Co. 248
Beach Land Co. 334, 338
Beaumont Gas Power Co. 419
Beaver River Power Co. 76, 163, 503
Beaverwick Water Co. 507
Bellingham, Washington 421
Berkeley, California 166, 253, 423
Berney Construction Co. 164
Bevan, Thos. H.—Oil-well supply-houses needed in Mexico 386
Big Four Electric Railway Co. 419
Big Springs Water Co. 422
Biggs, California 503
Billings, Montana, ...166, 337
Birch property, manufacture of gasoline from natural gas 430
Bitulithic pavement 30
Bi-weekly service between San Francisco and Panama 95
Blair, F. O.—Concrete pavement by day labor at Chehalis, Washington 370
Blakely Mill Co. 84
Blossom, D. H.—Paving in Salt Lake City 28
Board of Army Engineers on San Francisco water situation 181
Boise, Idaho 336
Boynton, Carl M.—Concrete pavements.. 387
Brayton Engineering Co. 508
Bright surface on galvanized wire, how to obtain 246
British Columbia, Fernie 421
Vancouver 76, 80
British Columbia Electric Co. 76
Brunnier, H. J.—Hanging fenders for docks 437
Buckhorn Land Co. 252
Bureau of Railway Economics and railway earnings 352
Burns & McDonnell 253, 254
Burton, W. M.—Invention of motor spirits 436
Busch-Sulzer Bros. Diesel Engine Co., pioneer Diesel-engine builders in the United States 431
Butler Construction Co. 72
Butte, Montana 251
Byllesby & Co., H. M., of Chicago.75, 175, 242

C

Cable, telephone, how made 499
Calaveras dam, proposed erection of.... 436
'Calcite', a self-unloading lake steamer.. 146
Caldwell, Idaho 76, 85, 162, 163
California, Alameda 79, 253
Alturas 164
And Nevada railroads 323
Arbuckle 77
Auburn 88, 338
Bakersfield 340
Berkeley 166, 253, 423
Capay 506
Central, and Pacific Gas & Electric Co. Strike 433
Chico 75, 166, 248, 336, 423
Colusa 79, 250
Davis 506
Dinuba 338
Dixon 75
Downieville 75
El Centro 168, 252
El Segundo 256, 340
Emeryville 340
Eureka 507
Farmington 77
Fresno 503
Fullerton 164
Greenville 248
Gridley 84
Grimes 333
Hollister 162
Live Oak 163, 252
Lodi 423
Los Angeles 77, 78, 80, 82, 84, 162, 163, 164, 166, 168, 250, 253, 256, 333, 334, 336, 337, 338, 420, 421, 423, 503, 504, 505, 506, 508
Loyalton 77, 503
Manhattan Beach 334
Martinez 253, 256, 336, 340
Marysville 78, 79, 84, 252, 333
Meridian 84, 504
Modesto 80
Montague 77, 252, 422, 506
Napa 423
Natoma 164
Nevada City 420, 506
Oakland 78, 84, 162, 165, 333, 423
Peanut 504
Petroleum 509
Placerville 79, 252
Pomona 75, 77
Princeton 253
Redding 252, 333, 338, 423
Redlands 163, 164, 421
Redondo Beach 334

354402

Generated on 2024-09-30 00:10 GMT / https://hdl.handle.net/2027/uiug.30112007837781
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.

California, Redwood City 78
Richmond 77, 79, 84, 249
Riverside 166, 253, 324, 333, 422
Roseville 334, 420
Sacramento 77, 78, 84, 162, 164, 165, 248, 249, 251, 253, 334, 337, 338, 420, 422, 504, 505, 506, 508
San Bernadino 162, 248
San Francisco 75, 76, 77, 78, 82, 84, 162, 163, 164, 165, 167, 248, 249, 250, 251, 253, 333, 334, 336, 337, 420, 422, 423, 424, 504, 505, 506, 507
San Jacinto 422
San Jose 79, 250
San Mateo 334
San Rafael 79, 423
Santa Ana 164
Santa Barbara 162
Santa Maria 256
Santa Monica 168
Sausalito 249, 420, 504
Smart 503
Stockton 77
Suisun 338, 423, 506
Susanville 77
Tejon Pass 78
Venice 334, 338
Watsonville 168
Weaverville 504
Willow 75, 333, 338
Winters 75
Woodland 70, 338, 422
Yreka 423
Yuba City 506
California Atlantic Steamship Co., withdrawn 94
California Delta Land Co. 77
California Development Co. 252
California-Michigan Land & Water Co.. 164
California-Oregon Power Co. 421
California Petroleum Co. 322, 509
California Public Utilities Act 175
California Railway & Power Co. 79
California, Shasta & Eastern Railroad Co. 324
California Telephone & Light Co. 413
Camas Prairie Railroad 339
Canadian Northern Railway 80
Canadian Pacific Railway Co. 162, 338
Capay, California 506
Care and operation of transformers—W. M. McConahey 62
Care of high vacuum apparatus 327
Carlinville concrete road cost data—A. N. Johnson 477
Carnegie Steel Co., success of 262
Carson, Nevada 77, 336
Cascade scenic highway—A. P. Denton... 122
Cast iron, how to drill chilled.....71, 416
Cedar river watershed, policy of Seattle in relation to 486
Cement, portland, how made 246
Cementing off water in the California oilfields—B. K. Stroud 203
Off water in drilling wells—Paul M. Paine 445
Process of excluding water from oil weels as practised in California—Ralph Arnold and V. R. Garfias... 315
Central California Gas Co. 244, 248
Central Colorado Power Co. 334, 421
Central Pacific Railroad Co. 337
Central Pacific, plan to turn over to Union Pacific in division of Southern Pacific and Union Pacific 95, 181
Chandler, Arizona 507
Chandler Dunbar Water Co. v. United States, water rights 429
Chehalis, Washington, concrete pavement by day labor at—F. O. Blair..... 370
Chicago and street railway operation ... 351
Chicago, Milwaukee & Puget Sound Railway 79
Chicago, Milwaukee & St. Paul Railroad. 249, 338
Chico, California.....75, 166, 248, 336, 423
Chico Water & Supply Co. 336
Chilled cast iron, to drill 71, 416
Chinese loan and the President 261
Cincinnati, strike of street-car operators. 433
City Electric Co. 333
City Street Improvement Co. 77
Civil engineers form union 175
Clara Vista Water Co. 76
Cloverdale Light & Power Co. 412
Coal, natural gas, and petroleum, recommended legislation 261

Page.

Coalinga Water & Electric Co. 503
Coast Counties Gas & Electric Co. 242
Colegrove Water Co. 507
Colfax, Washington 168, 420
Colorado, Colorado Springs 433
Denver 334, 421, 505
Colorado Power Co. 421
Colorado Springs, strike of street-car men 433
Columbia river power project—L. F. Harza and V. H. Reineking 406
Colusa, California 79, 250
Communication lines and power lines, inductive interference between 286
Community of interest idea 262
'Commuter area' and Bion J. Arnold 94
Company reports:
California Petroleum Co. 322
Central California Gas Co. 244
General Petroleum Co. 497
Great Western Power Co..68, 243, 412, 497
Holton Power Co. 243
Long Beach Consolidated Gas Co..... 244
Los Angeles Gas & Electric Corporation 323
Mexican Petroleum Co., Ltd.....244, 497
Mill Valley & Mt. Tamalpais Scenic Railway Co. 321
Mount Whitney Power & Electric Co. 322
Nevada-California Power Co. 497
Pacific Gas & Electric Co. 497
Pacific Light & Power Co. 242
Pacific Light & Power Corporation ... 412
Pacific Water Co. 412
Petaluma & Santa Rosa Railway 243
Portland (Ore.) Railway, Light & Power Co 244, 321
Puget Sound Traction, Light & Power 321
Riverside Water Co. 68
San Francisco, Napa & Calistoga Railway Co. 412
San Joaquin Light & Power Corporation 243, 322
Sierra Pacific Electric 322
Southern California Edison Co...243, 323
Southern Pacific Co. 68
Standard Oil Co. of California 321
Stone & Webster Engineering Corporation 160
Union Oil Co. 497
Union Pacific Co. 68
Western Pacific Co. 68, 497
White & Co., Inc., J. G., of New York. 160
Compressed air, moisture in 151
Compressors, measuring air-discharge of —E. A. Fessenden 313
Concrete and large railway bridges 345
And reinforced concrete 396
Floors 71
Machine v. hand mixing, cost of—C. H. Hubbell 484
On country roads, cost of—C. A. Thomas and T. F. Hickerson 143
Pavement by day labor at Chehalis, Washington—F. O. Blair 370
Pavements—Carl M. Boynton 387
Road cost data, Carlinville—A. N. Johnson 477
Slab flume construction, I, II—S. L. Stovall 353, 449
T-beams, method of computing reinforced—Gunder Hanson 326
Condenser tests, high-vacuum 301
Conservative Realty Co. 506
Considine & Bates Co. 420
Consolidated Midway Oil Co. 256
Construction of irrigation canal systems from an operation standpoint—P. M. Fogg 442
Constructura de Ferrocarriles Compania. 80
Contracting, system in engineering 292
Co-operation between the state and nation in irrigation and power development—John H. Lewis 275
Copper pipes, to coat with a non-conductor 71
Cordua Land Co. 252
Corliss governor troubles—F. C. Holly.. 415
Cost-keeping at Panama 474
Of concrete on country roads—C. A. Thomas and T. F. Hickerson..... 143
Of machine concrete mixing compared with hand mixing—C. H. Hubbell. 484
Of water per acre 379
Coghren & Woldson 424
Crewson, G. G.—Measuring the flow of air in pipes 414

Generated on 2024-09-30 00:06 GMT / https://hdl.handle.net/2027/uiug.30112007837781
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.
Crude oils, gravity of—Wm. H. Kritzer.. 290
Culebra cut, Panama canal, and importance of steam-shovels 429
Curtis steam turbines—W. L. R. Emmet, of General Electric Co. 430
Cutter & Malmgren 508
Cylinder head, to make gasket for modern steam-engine 246
To measure the clearance in an engine 71

D

Dam between Keokuk, Iowa, and Hamilton, Illinois 175
Davenport, Washington 78, 249, 335, 336
Davis, California 506
Davis & Webber Counties Canal Co. 76
Day, W. P.—A reinforced concrete railroad bridge 373
Dayton, Ohio, floods at 349
Dayton, Washington, ... 250
Death rate at Panama 3
Defeat of Rodenburg bill 179
De la Vergne Machine Co., crude-oil engine 431
Denton, A. P.—Cascade scenic highway.. 122
Denver & Rio Grande Railway 508
Denver & Salt Lake Railroad Co. 505
Denver, Colorado 334, 421, 505
Derivation of oil-well logs—Robert W. Phelps 281
Developing the remaining arid land sections in the West 90
Development of Seattle harbor—Paul P. Whitham 20
Diagram for area of railway culvert openings—T. J. Wright, Jr..... 245
For estimating cost of laying sanitary sewers—E. O. Eichelberger 501
Diesel engine 177
Engine, American 431
Engine and European manufacture, effect on American manufacture... 96
Engine and Western oil 430
Engine, application to Western conditions 432
Engine, first sale in United States larger than 225 hp. 429
Engine, stationary—Herbert Haas ... 209
Locomotive, first completed 246
Dinuba, California 338
Distant control of small capacity power and lighting circuits 247
District of Columbia, Washington 84
Ditch excavation on the Los Angeles aqueduct—O. W. Peterson 97
Division of Southern Pacific and Union Pacific railroads, Central Pacific... 95
Dixon, California 75
Docks, hanging fenders for—H. J. Brunnier 437
Dollar diplomacy 261
Dome Oil Co. 340
Dominguez Land Co. 84
Dougherty, J. 508
Dow, George E., Steam Pumping Engine Co. and Willans-Diesel engine in the United States 432
Downieville, California 75
Downieville Electric Co. 75
Drill chilled cast iron, how to.....71, 416
Durango Gas & Electric Co. 76

E

Eagle Rock Water Co. 75, 507
Earthquake excavation 158
Phenomena and Seismological Society of America 345
East Side Canal & Irrigation Co. 336
East Whittier Water Co. 77
Eastern American Dredging Co. 85
Eastern Pennsylvania Railways Co. 160
Eccles & Smith 423
Edison Electric Co. 75
Editorials:
American Institute of Electrical Engineers, proceedings for April 1913.. 348
American river bridge and concrete... 345
Award of John Fritz medal to Robert W. Hunt 89
California Public Utilities Act 175
Chandler Dunbar Water Co. v. United States 429
Chinese loan and the President 261

Page.
Editorials:
Coal, natural gas, and petroleum, recommended legislation 261
Community of interest idea 262
Dam between Keokuk, Iowa, and Hamilton, Illinois 175
Death rate at Panama 3
Diesel engine, first sold in United States larger than 225 hp..... 429
Diesel engines and Western oil 430
Dollar diplomacy 261
Efficiency Society, Inc. 429
Electrical Engineers and Fellows 348
Electrically operated vessel, another launched 430
Electrolysis and destruction of underground pipes 430
Engineering organizations 263
Engineers' Union 175
Esperanto 89
Flume construction, concrete 346
Harriman merger dissolution 5
Hunt, A. M., appointed chief of Dept. of Machinery of Panama-Pacific Exposition 345
International Scientific Esperantist Association 347
Kern County Oilmen's Protective Association 4
Leasing oil lands 262
Levees and levee construction, Mississippi river flood conditions of 1912. 346
Los Angeles aqueduct opened 261
Manufacture of gasoline from natural gas 430
Natomas Consolidated Co. 4
Northern California Power Co. 4
Ocean Shore Railway improvement.. 345
Oro Electric Corporation 4
Panama-Pacific Exposition, progress. Machinery Palace 429
Panama-Pacific International Engineering Congress, progress in organization of 347
Power and reclamation projects, cooperation between state and nation 345
Protecting the oil industry 4
Reclamation Service, conferences during 1912 90
Reclamation Service difficulties 176
San Francisco new sewer system 3
San Francisco water situation 91
Seismological Society of America, observing and recording earthquake phenomena 345
Slides in Culebra cut, Panama canal, and importance of steam-shovels in excavation 429
Southern Pacific Co. 5
Southern Pacific and Western Pacific, joint use of track 429
Standard Oil Co. 5
Status of the Diesel engine 177
Union Pacific Co. 5
Water and its cost per acre 346
Efficiency Society, Inc. 429
Eichelberger, E. O.—Diagram for estimating cost of laying sanitary sewers 501
El Centro, California 168, 252
Electric motors for oilfield service—L. A. Somers 107
Oil well drilling, speed-reducing gear for—F. A. Williamson 197
Power installation at El Tigre—Jas. W. Malcolmson 114
Electrical Engineers and Fellows 348
Electrically operated vessel, another launched 430
Electricity in the oilfields—H. A. Russell 269
Electrifying the oilfields—A. Emory Wishon 35
Electrolysis and destruction of underground pipes 430
Elements in oil-well drilling—Dorsey Hager 447
Elephant Butte, New Mexico 507
Ellensburg, Washington 164, 252
El Segundo, California 256, 340
Elsinore Electric Light & Power Co. ... 163
El Tigre, electric power installation at—James W. Malcolmson 114
Emeryville, California 340
Emmet, W. L. R.—Curtis steam turbines and General Electric Co. 430
Empire Water Co. 421

Generated on 2024-09-30 00:15 GMT / https://hdl.handle.net/2027/uiug.30112007837781
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.

Endicott, Washington 422
Engine cylinder, to measure the clearance in 71
Engineering Congress, progress in organization of Panama-Pacific International 347
Contracting, system in 292
Organizations 263
Engineers and increase of earnings 175
Engines, internal-combustion 152
Esperanto and 'Western Engineering' ... 89
Estuary channel, Oakland, dredging ... 423
Ethics for engineers, a proposed code... 228
Eureka, California 507
Eureka Lighting Co 75
Example of internal-combustion engine-operation 128
Excluding water from oil wells, cementing process of—Ralph Arnold and V. R. Garfias 315
Exhibit by federal government 179
Experience with water ram 230
Explosives, how they work 502
Exposition, 'dry' 7

F

Fairchild-Gilmore-Wilton Co. 78, 504
Farmington, California 77
Federal government exhibit 179
Federal leasing of oil lands 300
Fenders for docks, hanging—H. J. Brunnier 437
Fernie, British Columbia 421
Fidelity Lumber Co. 337
Files, to resharpen old 246
Fire extinguisher, foam as a gasoline.... 502
Flinn & Treacy 77
Flood prevention 350
Floods and flood control 349
Flow of air in pipes, measuring the—G. G. Crewson 414
Flume construction, concrete 346
Construction, concrete slab, I, II—S. L. Stovall 353, 449
Foam as a gasoline fire extinguisher.... 502
Fogg, P. M.—Construction of irrigation canal systems from an operation standpoint 442
Forbes, C. R.—Mining on the Panama canal 48
Forbes & Co. 85
Ford, Benjamin 504
Forsyth, Robert, death of 86
Foster & Hindle 77
Freeman, John R., and report on Hetch-Hetchy water-supply project 95
Freewater, Oregon 76
Fresno, California 503
Fresno Canal & Irrigation Co. 506
Fresno City Water Co. 75
Fresno, Hanford & Summit Lake Interurban railroad 250
Fritz medal, John, award to Robert W. Hunt 89
Fuel for use in heavy engine work, new, Motor Spirits 436
Fullerton, California 164

G

Galvanized wire, how to obtain bright surface on 246
Gas engine manufacture, German profits in 418
Engine troubles 161
Manufacture of gasoline from natural —Charles T. Hutchinson 363
Natural and manufacture of gasoline. 430
Natural, value of 246
Gasket for cylinder-head, to make for modern steam-engine 246
Gasoline, the automobile and the price of 431
Fire extinguisher, foam as a..... 502
Manufacture from natural gas 430
Geary Street Municipal Railway 79, 505
General Petroleum Co. 82, 83, 340, 497
Generator and prime-mover capacities—David B. Rushmore and Eric A. Lof 401
Geologic notes on Santa Susanna district —Henry R. Johnson 383
German profits in gas-engine manufacture 418
Glendale Con. Water Co. 507
Globe, Arizona 508

Page.

Goat Island as union terminal 434
Gold Mountain Water Co. 67
Government exhibit at Panama-Pacific Exposition 265
Grand Canyon of Arizona and Panama-Pacific Exposition 419
Grand Rapids-Muskegon Power Co. 194
Grand Trunk Pacific 338
Grants Pass, Oregon 80, 162
Grass Valley, Nevada 252
Gravity of crude oils—William H. Kritzer 290
Great Britain and the Panama canal bill 8
Great Falls Power Co. and impetus to electric traction 96
Great Northern Railroad Co.....333, 505, 508
Great Western Power Co. 68, 243, 323, 333, 412, 497, 503
Greater Los Angeles Water Co. 507
Green, H. B. 423
Greenville, California 248
Gridley, California 84
Grimes, California 333
Guthrie-McDougall & Co. 508

H

Hager, Dorsey—Elements in oil-well drilling 447
Hall Water Co., E. E. 507
Halsey & Co., N. W 78
Hanging fenders for docks—H. J. Brunnier 437
Hanson, Gunder—Method of computing reinforced concrete T-beams 326
Harbor development of Seattle—Paul P. Whitham 20
Harbor improvements, Richmond 54
Harbor Island project 26
Harbor, business in Los Angeles 434
Harbors, Pacific coast, improvement of.. 434
Harriman lines, unmerging of, California phases 181
Harriman merger dissolution 5
Harrington, Washington 420
Harza, L. F., and V. H. Reineking—Columbia river power project 406
Hassam Paving Co. 420
Haviland & Tibbetts 54
Hayward-Lane & Hobart Estate Co. 252
Helay-Tibbitts Construction Co. 84, 253, 419, 423
Helena Light & Railway Co. 160
Helena, Montana 164
Hering, Carl, on determination of stray currents in underground pipes ... 430
Hetch-Hetchy bond 436
Permit v. Spring Valley Water Co.91, 181
Report on by John R. Freeman 95
Temporary eclipse 265
Hickerson, T. F., and C. A. Thomas—Cost of concrete on country roads 143
High-vacuum apparatus, care of 327
Vacuum condenser tests 301
Highway improvements in Washington.. 232
Proposed national 297
Hollister, California 162
Holly, F. C.—Corliss governor troubles.. 415
Holmes Walton Co. 75
Holt & Jeffry 166, 253
Holton Power Co. 243
Home Telephone & Electric Co. 76
How explosives work 502
How telephone cable is made 499
Howard, J. C.—Refining petroleum crude oils 223
Hubbell, C. H.—Cost of machine concrete mixing v. hand mixing 484
Humboldt Gas & Electric Co. 75, 242
Hunt, A. M., appointed chief of Department of Machinery, Panama-Pacific Exposition 345
Hunt, Robert W., and the John Fritz medal 89
Hutchinson, Charles T.—Manufacture of gasoline from natural gas 363
Hyde, Lee M., death of 256
Hydraulic Power Co., Niagara Falls 161
Hydro-electric development, Keokuk 305

I

Idaho, Boise 336
Caldwell 78, 85, 162, 163
Kellogg 166
Lapwai 77

Generated on 2024-09-30 00:06 GMT / https://hdl.handle.net/2027/uiug.30112007837781
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.

Idaho, Lewiston 253, 335, 339, 503, 505
Pocatello 503
Saint Maries 504
Idaho Falls Power & Transmission Co. .. 76
Idaho Northern Railway Co., Ltd. 162
Imperial Valley Gas Co. 163, 248
Improvement of pole preserving methods 319
Indian & Colonial Development Co. 340
Indian Valley Electric Light & Power Co. 248
Inductive interference between power and communication lines 286
Industrial Workers of the World, Paterson, N. J. 433
Inland Portland Cement Co. 338, 508
Insulators 183
Internal-combustion engines 152
Combustion engine operation, example of 128
International Portland Cement Co. 508
International Power & Manufacturing Co. 163
International Railway & Development Co. 76
International Scientific Esperantist Association 347
Investigation of the Reclamation Service —F. K. Lane 480
Irrigation and power development, cooperation between state and nation in—John H. Lewis 275
And water-supply 76, 164, 251, 336, 422, 506
Canal systems, construction from operation standpoint—P. M. Fogg.....442
Ditches in Hawaii, lining 418
Iron Mountain railroad, valuation of 250
Iron or steel, how to remove rust on ... 71

J

Jacobson-Bade Co. 423
James, E. A.—Oil for macadam roads.. 320
John Fritz medal, award to Robert W. Hunt 89
Johnson, A. N.—Carlinville concrete road cost data 477
Johnson, Henry R.—Geologic notes on
Judell, Adolph, president of Board of Public Works 94
Santa Susanna district 383
Judell, A., and H. W. Shimer—San Francisco sewer system 11
'Jupiter', U. S. collier, electricially operated 430

K

Keating & Sons, Richard 420
Kellogg, Idaho 166
Kentucky Public Service Co. 160
Keokuk hydro-electric development 305
Kern County Oilmen's Protective Association 4
Kern crude oil, Pocahontas coal and..... 72
Keyes domestic water system 254
Keystone Water Users' Association 337
Kittitas reclamation district, Washington 164
Klamath Falls, Oregon 421, 422, 507
Knight Con. Power Co. 76
Knight's landing cut, proposed 131
Kritzer, William H.—Gravity of crude oils 290

L

Lake steamer, 'Calcite', self-unloading .. 146
Lake Tahoe railway, valuation of 250
Lane, F. K.—Investigation of the Reclamation Service 480
Lange & Bergstrom 419
Lapwai, Idaho 77
Large volume metering of natural gas—Chester Earl Wood 125
Leadville Light & Power Co. 421
Leasing oil lands 262
Oil lands, federal 300
Legislation at Sacramento 352
Regulating production of coal, natural gas, and petroleum recommended. 261
Leland & Meyers 164
Levees and levee construction, Mississippi river flood conditions of 1912..... 346
And prevention of floods 349
Lewis, John H.—Co-operation between state and nation in irrigation and power development 275

Page.

Lewiston, Idaho 253, 335, 339, 503, 505
Lind & Co., Nels 507
Lining irrigation ditches in Hawaii 418
Lippincott, J. B.—Tunnel grouting at Haiwee reservoir, Los Angeles aqueduct 220
Little Rock Power & Water Co. 76
Live Oak, California 163, 252
Livermore Water & Power Co. 333
Livingston, Montana 166
Locomotive, Diesel, first completed 246
Engineers' advance in wages 9
Lodi, California 423
Lof, Eric A., and David B. Rushmore—Generator and prime-mover capacities 401
Logan, Utah 337, 422
Logan Rapid Transit Co. 337
Lohmanizing process 73
Lohrenz, J. J. 508
Long Beach Consolidated Gas Co. 244
Long Beach, salt-water fire protection... 164
Long, Percy V.—Bill to amend Public Utilities Act, San Francisco v. Spring Valley Co. 92
Los Angeles, California..77, 78, 80, 82, 84, 162, 163, 164, 166, 168, 250, 253, 256, 333, 334, 336, 337, 338, 420, 421, 423, 503, 504, 505, 506, 508
And municipal ownership 351
And water commission bill 435
Aqueduct 181, 220
Aqueduct, ditch excavation on the—O. W. Peterson 97
Aqueduct opened 261
Harbor, business in 434
Harbor improvement, summary of expenditure 166
Los Angeles County Water Co. 507
Los Angeles Electric Railway Co. 80
Los Angeles Gas & Electric Corporation 163, 248, 323, 324, 503
Los Angeles Investment Co. 506
Los Angeles Railway Co. 162, 242
Los Angeles & Redondo Railway Co. ... 242
Los Angeles-Yuma auxiliary 78
Los Angeles, San Pedro & Salt Lake Railway 162
Los Gatos Telephone Co. 419
Loyalton, California 77, 503
Luckenbach Steamship Co. competes with Pacific Mail and American-Hawaiian companies 95
Lyons-Atlas Diesel Engine Co..... 431

M

Macadam roads, oil for—E. A. James... 320
Machinery Palace, Panama-Pacific Exposition 429
Malcolmson, James W.—Electric power installation at El Tigre 114
Manhattan Beach, California 334
Manila Electric Railroad & Lighting Corporation 160
Manufacture of gasoline from natural gas—Charles T. Hutchinson..... 363
Marin Water & Power Co. 251
Martinez, California 253, 256, 336, 340
Marysville, California.....78, 79, 84, 252, 333
Maschinenfabrik Augsburg-Nurnberg A. G. 431
McConahey, W. M.—Care and operation of transformers 62
McLaren & Peterson..... 508
McEnery, J. J. 420
McSheehy Bros. 507
Measuring air discharge of compressors—E. A. Fessenden..... 313
Flow of air in pipes—G. G. Crewson.. 414
Mercer Fraser Co. 253
Merchants Light & Power Co. 76
Meridian, California.....84, 504
Mery Bros. 166
Method of cementing-off water in drilling wells—Paul M. Paine..... 445
Of computing reinforced concrete T-beams—Gunder Hanson..... 326
Mexican Petroleum Co., Ltd. 83, 244, 497
Mexico City, Mexico..... 80
Mexico and war..... 179
Houses needed in oil well supply—Thomas H. Bevan..... 386
M. H. & M. Oil Co. 340

Generated on 2024-09-30 00:13 GMT / https://hdl.handle.net/2027/uiug.30112007837781
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.

Midland Counties Gas & Electric Co. 503
Midland Counties Public Service Co. 503
Midway Gas Co. 160, 182, 503
Mietz & Weiss of New York, crude-oil engine 432
Mill Valley & Mt. Tamalpais Scenic Railway Co. 250, 321
Mining on the Panama canal—C. R. Forbes 48
Mississippi river flood conditions of 1912, levees and levee construction..... 346
Modern street railway track construction —C. B. Vorce..... 392
Modesto, California..... 80
Modesto-Empire Traction Co. 80
Moisture in compressed air..... 151
Monolith plant..... 166
Montague, California.....77, 252, 422, 506
Montague Water Co. 252
Montana, Billings.....166, 337
Butte 251
Helena 164
Livingston 166
Whitefish 77
Montreal Transportation Co. 430
Moore & Scott Iron Works..... 338
Morcereau Bridge & Construction Co..... 423
Morey Turner Co. 77
Motor Spirits 436
Mount Diablo Light & Power Co. 79
Mount Whitney Power & Electric Co., 67, 248, 322, 346
Mountain Development Co. 503
Mountain Power Co. 248
Mountain Quarries Co. and American river bridge 345
Muncie Engine Co. of Muncie, Indiana, crude-oil engine 432
Municipal ownership and Los Angeles.... 351
Water plant, Riverside, California.... 324
Municipalities to public utilities, relation of 350
Myriawatt—H. G. Scott and Haylett O'Neill 238
Standardization of 237

N

Napa, California 423
Nashville masonry reservoir, California.. 253
National action, flood control..... 350
Highway proposed 297
Resources, conservation of..... 435
National Pacific Oil Co. 256
Natoma, California 164
Natomas Consolidated Co.....4, 164, 336
Natural gas, large volume metering of—Chester Earl Wood..... 125
Gas, manufacture of gasoline from—Charles T. Hutchinson..... 363
Gas, value of..... 246
Nelson, British Columbia..... 334
Nelson, Roy E. 504
Nenzel Electric Co. 248
Nevada, Carson.....77, 336
Grass Valley 252
Reno 166
Rochester 164, 248
Nevada and California railroads, net of various 323
Nevada-California Power Co. 497
Nevada City, California.....425, 506
Nevada Country Narrow Gauge Railroad 352, 505
Nevada Water Consumer's Association... 252
Newell, F. H., Director of Reclamation Service 90
New Jersey, Paterson..... 433
New London Ship & Engine Co. of Groton, Connecticut, crude oil engine..... 431
New Mexico, Elephant Butte..... 507
Petroleum news..... 509
New oil-engined ship..... 235
Newport, Washington..... 337
North Mountain Power Co. 75
North Yakima, Washington.....77, 84, 163, 164, 251, 252, 253, 338, 422
Northern California Power Co. 4, 75, 333, 503
Northern California Railroad & Navigation Co. 337

Page.

Northern Electric Railroad...79, 250, 423, 505
Northern Pacific Railroad...165, 251, 424, 508
Northern Railroad Co. 250
Northwestern Electric Co. 75, 248
Northwestern Pacific Railroad Co. 507

O

Oakdale irrigation district..... 155
Oakland, California.....78, 84, 162, 165, 333, 423
Oakland & Antioch Railway.....78, 160, 250
Oakland, Antioch & Eastern Railway.... 160, 162, 505, 507
Oakland street improvements for 1912—Wm. J. Baccus..... 201
Ocean Shore Railway, improvement..... 345
Ocean to ocean highway..... 78
Ogden, Utah.....336, 337, 422, 508
Ohio, Cincinnati..... 433
Oil, California dividends.....81, 168, 254, 255, 339
California exports 255, 339
Engined ship, a new..... 235
For macadam roads—E. A. James..... 320
Lands, federal leasing of..... 300
Production statistics for California.... 254, 330
Stocks on hand.....255, 340
Well drilling, elements in—Dorsey Hager 447
Well logs, derivation of—Robert W. Phelps 281
Well supply houses needed in Mexico—Thomas H. Bevan..... 386
Wells, cementing process of excluding water from—Ralph Arnold and V. R. Garfias 315
World's total production 1911 and 1912 339
Oil Producers Agency..... 82
Oil Producers Marketing Association..... 82
Oilfield, development and condition in California 255, 340
Service, electric motors for—L. A. Somers 107
Oilfields, cementing off water in the California—B. K. Stroud..... 203
Electricity in—H. A. Russell..... 269
Electrifying—A. Emory Wishon..... 35
Oils, gravity of crude—Wm. H. Kritzer.. 290
Ojai Power Co. 75
Oklahoma, Bartelsville 425
Oklahoma, petroleum news..... 509
Old Mission Portland Cement Co..... 504
Olig Crude Oil Co. 340
Olympia, Washington.....168, 248, 252
Omak, Washington 337
O'Neill, Haylett and H. G. Stott—Myriawatt 238
Oregon, Freewater 76
Grants Pass 80, 162
Klamath Falls 421, 422, 507
Pendleton 248, 249, 422
Portland 75, 162, 164, 336, 338
Oregon Short Line..... 162
Oregon Valley Land Co..... 164
Oregon-Washington Railway & Navigation Co. 508
Oro Electric Corporation.....4, 75, 163, 175, 333
Oroville, Washington.....84, 333, 334, 336, 422
O'Shaughnessy, M. M., appointed city engineer 94
Overhead transmission lines, pressure limits of—Alfred Still..... 183

P

Pacific coast harbors, improvement of... 434
Pacific Electric Co.....163, 413, 419, 505
Pacific Electric Railway Co.....80, 155, 162, 413, 419, 505
Pacific Fire Extinguisher Co..... 423
Pacific Gas & Electric Co.....75, 252, 333, 341, 420, 422, 433, 497, 503, 505, 506
Pacific Interior Railway.....80, 162
Pacific Light & Power Corporation....75, 80, 243, 333, 412
Pacific Power & Light Co. 77, 163, 164, 252, 422
Pacific Railroad of Nicaragua..... 160

Generated on 2024-09-30 00:08 GMT / https://hdl.handle.net/2027/uiug.30112007837781
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.
Pacific Tank & Pipe Co. 423
Pacific Telephone & Telegraph Co. 508
Paine, Paul M.—Method of cementing-off water in drilling wells..... 445
Paint as an engineering material—Maximilian Toch 478
Pajaro Valley Railway, valuation of..... 250
Palmdale Water Co.....76, 164, 251
Panama Canal bill and Hay-Pauncefote treaty 8
Canal construction expenditures to December 31, 1912..... 487
Canal, mining on—C. R. Forbes..... 48
Canal and importance of steam-shovels 429
Cost keeping at..... 474
Death rate at..... 3
Free duty law on agricultural machinery 294
Panama Pacific Exposition....83, 170, 180, 341, 419, 508
Hunt, A. M., chief of Dept. of Machinery 345
Progress, Machinery Palace..... 429
Panama Pacific International Engineering Congress, progress in organization of..... 347
Pasco, Washington..... 166
Paso Robles Electric Light & Power..... 503
Paterson, New Jersey, Industrial Workers of the World..... 433
Pavement by day labor at Chehalis, Washintgon, concrete—F. O. Blair 370
Pavements, concrete—Carl M. Boynton... 387
Paving in Salt Lake City—D. H. Blossom 28
Peanut, California..... 504
Pendleton, Oregon.....248, 249, 422
Peninsula Railway Co. 79
Pennsylvania, Pittsburgh..... 251
Pennsylvania Railroad..... 251
Pennsylvania Steel Co. 423
Peoples Water Co. 164, 412, 506
Petaluma & Santa Rosa Railway.....243, 333
Peterson, O. W.—Ditch excavation on the Los Angeles aqueduct..... 97
Peterson James Co. 419
Phelps, Dodge & Co. 429
Phelps, Robert W.—Derivation of oil-well logs 281
Phoenix, Arizona 253
Pin type insulators.....184, 186
Pinal-Dome Co. and manufacture of gasoline from natural gas..... 430
Pipes, to coat with a non-conductor, copper 71
Underground, destruction due to electrolysis 430
Pit River Power Co. 419
Pittsburgh, Pennsylvania..... 251
Placerville, California 79, 252
Pocahontas coal and Kern crude oil..... 72
Pocatello, Idaho 503
Pole preserving methods, improvement of 319
Policy of Seattle in relation to Cedar river watershed 486
Pomeroy, Washington 335
Pomona, California 75, 77
Porterville N. E. Railroad, valuation of.. 250
Portland, Oregon.....75, 162, 164, 336, 338
Portland cement, how made..... 246
Proposed state law dealing with manufacture of 312
Portland Concrete Pile Co. 84
Portland Irrigation Co. 164
Portland (Ore.) Railway, Light & Power Co. 244, 321
Power and communication lines, inductive interference between..... 286
And lighting circuits, distant control of small capacity..... 247
And reclamation projects, co-operation between state and nation in development of 345
Factor 138
Project, Columbia river—L. F. Harza and V. H. Reineking..... 406
President and the Chinese loan..... 261
Pressure limits of overhead electric transmission lines—Alfred Still..... 183
Prime mover capacities, generator and—David B. Rushmore and Eric A. Lof 401
Princeton, California..... 253
Page.
Proposed code of ethics for engineers.... 228
Knight's Landing cut..... 131
National highway..... 297
State law dealing with the manufacture of portland cement..... 312
Protecting the oil industry..... 4
Provo, Washington.....421, 422
Public-service corporations, valuation of 10
Public Utilities Act, bill to amend, San Francisco v. Spring Valley Co.—Percy V. Long..... 92
Public utilities, state control of..... 435
Puget Sound Bridge & Dredging Co..... 76
Puget Sound Traction, Light & Power Co. 72, 321
Pumping, air-lift..... 502

Q

Quincy, Washington..... 334
Quincy Valley Water User's Association.. 252

R

Rail transportation of oil.....267
Railroad bridge, reinforced concrete—W. P. Day 373
Railroads, California and Nevada..... 323
Railway earnings and Bureau of Railway Economics 352
Railways, electrification of transcontinental 352
Randall, H. D.—Water-power resources tributary to Salt Lake City, Utah.. 283
Rate wars, economic significance of waste due to 95
Reclamation and power projects, co-operation between state and nation in development of 345
Reclamation District No. 900, Yolo county, California 324
Service, conference of 1912—F. H. Newell 90
Service difficulties 176
Service, investigation of—F. K. Lane 480
Redding, California.....252, 333, 338, 423
Redlands, California.....163, 164, 421
Redlands, Lugonia Crafton Domestic Water Co. 76
Redondo Beach, California..... 334
Redwood City, California..... 78
Rees, Colonel Thomas, of U. S. Army Engineer Corps..... 434
Refining petroleum crude oils—J. C. Howard 223
Refuse Disposal Co. 253
Rehorn, W. R.—Street improvements in Walla Walla in 1912..... 459
Reineking, V. H. and L. F. Harza—Columbia river power project..... 406
Reinforced concrete railroad bridge—W. P. Day 373
Reno, municipal improvements in 1912... 166
Report, Arnold transportation..... 295
Of Stone & Webster Corporation, on Great Falls Power Co. 96
Republic of Panama and free duty law on agricultural machinery 294
Resharpen old files..... 246
Respecting water powers—A. V. White... 139
Review of the month.
Alaska coal land matters..... 9
American politics and Europe..... 265
Arnold, Bion J. and "commuter area" 94
Board of Army Engineers, San Francisco adequate water supply..... 181
California phases, unmerging of the Harriman lines 181
Central California and Pacific Gas & Electric Co. strike..... 433
Chicago and street railway operation 351
Defeat of Rodenburg bill for federal government exhibit at Panama Pacific Exposition 179
Diesel engines..... 96
Division of Southern Pacific and Union Pacific railroads..... 95
Electric traction and Great Falls Power Co. 96
Electrification of transcontinental railways 352

Generated on 2024-09-30 00:11 GMT / https://hdl.handle.net/2027/uiug.30112007837781
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.

Review of the month.
Exposition, 'dry' 7
Floods and flood control, Dayton, Ohio 349
Goat Island, to cede to California, California v. United States 434
Government exhibit and Panama Pacific Exposition 265
Great Britain and the Panama Canal bill 8
Hetch-Hetchy 95, 265
Legislation at Sacramento 352
Locomotive engineer's advance in wages 9
Los Angeles aqueduct 181
Los Angeles harbor and business in.. 434
Luckenbach Steamship Co. and biweekly service between San Francisco and Panama 95
Mayor Rolph appoints M. M. O'Shaughnessy and Adolph Judell 94
Mexico and war 179
Midway Gas Co. and Los Angeles 182
Motor Spirits 436
Municipal ownership and Los Angeles 351
Nevada County Narrow Gauge Railroad, sale of 352
Pacific coast harbors, improvement of 434
Paterson, New Jersey, Industrial Workers of the World 433
Public-service corporations, valuation of 10
Rail transportation of oil 267
Railway earnings and Bureau of Railway Economics 352
Relation of municipalities to public utilities, progress of 350
Salt Lake City, strike among building trades 433
San Francisco, transportation facilities 180
San Francisco water supply and Spring Valley Water Co. 436
Spring Valley property to be purchased by San Francisco 350
Spring Valley Water Co. 7
Storms, W. H., discharged from State Mining Bureau 93
Strike of street-car operators in Cincinnati 433
Transportation affairs in regard to Exposition 266
Union Pacific, Southern Pacific, and Central Pacific merger troubles.... 266
United Railroads and San Francisco, difficulties to be settled 351
Water Commission bill and state control of public utilities 435
Western Engineering begins second year 267
Western Pacific, interest in S. P., U. P. and C. P. troubles 266
Withdrawal of California Atlantic Steamship Co. 94
United Railroads Co. 7
Revolving field of alternating current mechanically illustrated 330
Rich & Co., A. J. 164, 422, 506
Richmond, California 77, 79, 84, 249
Richmond harbor improvements 54
Richmond Light & Power Co. 75, 242
Ritzville, Washington 336, 504
Riverbank experimental road 481
Riverside, California 166, 253, 324, 333, 422
Riverside artesian domestic water system 254
Riverside Water Co. 67, 68, 254
Road drag—E. F. Ayres 472
Riverbank experimental 481
Robinson Water & Electric Co., Russell.. 503
Rochester, Nevada 164, 248
Rodenburg bill, defeat of 179
Rolph, James, Jr., city engineer and president of Board of Public Works appointments 94
Rondout siphon—J. F. Springer 41
Roseville, California 334, 420
Rules for conducting tests of waterwheels 144
Rushmore, David B. and Eric A. Lof—Generator and prime mover capacities 401
Russell, H. A.—Electricity in the oilfields 269
Russell Robinson Water & Electric Co. .. 503
Rust on iron or steel, how to remove.... 71
[illegible]ding, new patent 71

S

Page.

Sacramento, California 77, 78, 84, 162, 164, 165, 248, 249, 251, 253, 334, 338, 420, 422, 504, 505, 506, 508
Sacramento Natural Gas Co. 333
Sacramento Valley Electric Railroad Co. 79, 250
Sacramento Valley Est. railroad, valuation of 250
St. Maries, Idaho 504
St. Mary's river, and water rights 430
Salida Light & Power Co. 421
Salt Lake City, Utah 76, 249, 251, 252, 253, 336, 339, 420, 424, 503, 504, 505, 508
Paving in—D. H. Blossom 28
Strike among building trades 433
Water-power resources tributary to—H. D. Randall 283
Salt Lake & Ogden Railway 76, 505
Salt Lake & Utah Railroad Co. 251, 505
San Bernardino, California 162, 248
San Diego & Southeastern Railroad 333
San Diego-Arizona auxiliary 168
San Diego Consolidated Gas & Electric Co. 323
San Francisco, California 75, 76, 77, 78, 82, 84, 162, 163, 164, 165, 167, 248, 249, 250, 251, 253, 333, 334, 336, 337, 420, 422, 423, 424, 504, 505, 506, 507
New sewer system 3, 164
Road construction to county line 249
Scenic boulevard 166
Sewer system—A. Judell and H. W. Shimer 11
Water situation 90, 181
San Francisco, Napa & Calistoga Railway Co. 412
San Francisco, Oakland & San Jose Terminal Railways 165
San Francisco, Oakland Terminal Railways 250
San Gabriel Valley Water Co. 77
Sangamo Electric Co., Springfield, Illinois 161
San Jacinto, California 422
San Joaquin Light & Power Co. 38, 67, 160, 163, 243, 322
San Jose, California 79, 250
San Jose Terminal Railroad 250
San Jose Water Co. 251, 503, 506
San Juan Pacific Railway 162
San Juan Water & Power Co. 76
San Mateo, California 334
San Mateo county 155
San Rafael, California 79, 423
Santa Ana, California 164
Santa Barbara, California 162
Santa Fe Railway 162, 250, 337, 419
Santa Maria, California 256
Santa Maria field, manufacture of gasoline from natural gas 430
Santa Maria Oil Fields, Ltd. 83
Santa Maria Va. railroad, valuation of... 250
Santa Maria Water Works 251
Santa Monica, California 168
Santa Susanna district, geologic notes on —Henry R. Johnson 383
Sausalito, California 249, 420, 504
Scranton Smelting & Mining Co. 249
Seattle, Washington 76, 336
Harbor, development of—Paul P. Whitham 20
Relation to Cedar river watershed, policy of 486
Security Bridge Co. 253
Seismological Society of America, earthquake phenomena 345
Self-unloading lake steamer, the 'Calcite' 146
Sentinel Heights Water Co. 506
Sewage system for a small town—J. E. Tupper 463
Sewer system, San Francisco's new 3
System, San Francisco—A. Judell and H. W. Shimer 11
Sewers, diagram for estimating cost laying sanitary—E. O. Eichelberger... 501
Shasta & Eastern Railway Co. 337
Shell Trading & Transportation Co. 83
Shimer, H. W. and A. Judell—San Francisco sewer system 11

Generated on 2024-09-30 00:08 GMT / https://hdl.handle.net/2027/uiug.30112007837781
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.

Sierra & San Francisco Power Co. 67, 76
Sierra Electric Power Co. 333
Sierra Pacific Electric..... 322
Sierra Railway..... 505
Silver Lake Power & Irrigation Co. 507
Siphon, Rondout—J. F. Springer..... 41
Smart, California..... 503
Smith Booth-Usher Co..... 164
Smith, F. M., interests..... 419
Snare & Friest..... 85
Snow Moody Development Co..... 77
Snow Pump Co. of Buffalo, Diesel-type engine 431
Solano Irrigation Farm Co. 338, 506
Somers, L. A.—Electric motors for oilfield service 107
Sonorous aluminum alloy and house doorbells 246
Soo Line, Montana..... 251
Soule, Frank, death of..... 256
South Antelope Valley Irrigation Co...76, 164, 251
South Pasadena Short Line..... 162
South Sierra Power Co..... 248
Southern California Edison Co....243, 248, 323, 333, 419
Southern California Gas Co..... 503
Southern Counties Gas Co. 163, 248
Southern Ocean-to-Ocean Highway Association 168
Southern Pacific Co.....5, 68, 78, 79, 95, 162, 181, 250, 413, 419, 423, 424, 505
Southern Pacific and Union Pacific, division of 95
Southern Pacific and Western Pacific, joint use of track..... 429
Southern Sierras Power Co., Inyo county 163, 333, 421, 507
Southside Water Co..... 252
Southwest Electric Co..... 163
Speed reducing gear for electric oil-well drilling—F. A. Williamson..... 197
Spokane, Washington.....162, 166, 168, 249, 251, 252, 333, 335, 338, 420, 424, 503, 505, 507, 508
Spokane Asphalt, Macadam & Paving Co. 168
Spokane, Portland & Seattle Railroad Co. 424
Spreckels Ranch Co., John D. 422
Spring Valley Water Co.....7, 90, 91, 422, 506
And San Francisco water-supply affairs 90, 350, 436
v. Hetch-Hetchy permit.....91, 182
Springer, J. F.—Rondout siphon..... 41
St. Helens Creosoted Piling Co..... 84
Standard American Dredging Co..... 424
Standard Gas & Electric Co.....242, 323
Standardization of the Myriawatt..... 237
Standard Oil Co.....5, 82, 83, 256, 340, 424
Standard Oil Co. of California..... 321
Standard Portland Cement Co..... 338
State law dealing with manufacture of portland cement proposed..... 312
State Mining Bureau, discharge of W. H. Storms 93
Stationary Diesel engine—Herbert Haas 209
Status of Diesel engine..... 177
Steam-shovel work, to handle sand in.... 72
Steam-shovels in excavation, Panama canal 429
Steamer, self-unloading lake, the 'Calcite' 146
Steel, how to remove rust on iron or..... 71
Still, Alfred—Pressure limits of overhead electric transmission lines..... 183
Stockton, California 77
And Public Utilities Act..... 175
Stockton Gas & Electric Corporation..75, 242
Stockton Terminal & Eastern Railway Co. 505
Stoll Water Co., Edward..... 507
Stone & Webster Engineering Corporation 160, 333
Storage batteries..... 72
Storms, W. H., as State Mineralogist, discharged 93
Stott, H. G. and Haylett O'Neill—Myriawatt 238
Stout, Fred H..... 504
Stovall, S. L.—Concrete slab flume construction I, II.....353, 449
Street Improvements at Walla Walla in 1912—W. R. Rehorn..... 459
Railway operation and Chicago..... 351
Railway track construction, modern—
C. B. Vorce..... 392
Strike in central California, Pacific Gas & Electric Co. 433
Of street-car men at Colorado Springs 433
Stroud, B. K.—Cementing off water in the California oilfields..... 203
Sturm, F. L. 505
Suisun, California.....338, 423, 506
Sulzer Brothers Diesel engine in United States 432
Sun river project..... 164
Susanville, California..... 77
Symmes & Means 77
System in engineering contracting..... 292

T

Tacoma, Washington..... 507
Tacoma Wood Pipe Co. 507
Tejon Pass, California..... 78
Telephone cable, how made..... 499
Telluride Power Co. 76
Tests of waterwheels, rules for conducting 144
Thermal efficiency equivalents—J. W. White 158
Thomas, C. A. and T. F. Hickerson—Cost of concrete on country roads..... 143
Toch, Maximilian—Paint as an engineering material 478
Tonopah & T. railroad, valuation of..... 250
Torrance Water Power & Light Co..... 164
Track construction, modern street railway—C. B. Vorce..... 392
Traffic Oil Co. 340
Transcontinental railways, electrification of 352
Transformers, care and operation of—W. M. McConahey 62
Transportation affairs in relation to Exposition..... 266
Facilities in San Francisco..... 180
Report, Arnold..... 295
Truckee General Electric Co..... 251
Trustee Co. 333
Tulare County Power Co. 248, 333
Tunnel grounding at Haiwee reservoir, Los Angeles aqueduct—J. B. Lippincott 220
Tuolumne system 182
Tupper, J. E.—Sewage system for a small town 463
Twin Peaks tunnel..... 337
Tynemouth, steel vessel electrically operated 430

U

Union Iron Works.....79, 82, 337
Union of civil engineers..... 175
Union Oil Co.....256, 424, 497
And manufacture of gasoline from natural gas..... 430
Sale 154
Union Pacific Co.....5, 68, 95, 181
Union Pacific and Southern Pacific, division of..... 95
Union Pacific, Southern Pacific, and Central Pacific merger troubles..... 266
United Light & Railways Co..... 160
United Light, Fuel & Power Co..... 333
United Railroads Co.....7, 180, 505, 507
United States and Goat Island..... 434
United States Cast Iron Pipe & Foundry Co. 164
United States Reclamation Service and water and its cost per acre..... 346
United States Steel Products Co..... 423
Unmerging of Harriman lines, California phases 181
Upland-San Bernardino line..... 505
Usines Carels Freres of Ghent, Belgium.. 429
Utah, Logan 337
Ogden 336, 337, 422, 508
Provo 421, 422
Salt Lake City...76, 249, 251, 252, 253, 336, 339, 420, 424, 503, 504, 505, 508
Utah Construction Co..... 507
Utah Copper Co. 76
Utah Light & Power Co. 508
Utah Light & Railway Co. 30, 337, 503

Generated on 2024-09-30 00:16 GMT / https://hdl.handle.net/2027/uiug.30112007837781
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.

Utah Marble & Construction Co. 420
Utah Power & Light Co. 249, 503
Utah Securities Corporation..... 76

V

Vallejo & Northern Railroad Co. 70, 250
Valley Gas & Electric Corporation..... 324
Vancouver, British Columbia.....76, 80
Venice, California.....334, 338
Vincent, C. D. 164
Vorce, C. B.—Modern street railway track construction 392

W

Waddell & Harrington..... 507
Walla Walla, Washington.....77, 78, 80, 164, 249, 336, 459
  Street improvements in 1912—W. R. Rehorn 459
Walla Walla Valley Railroad Co. 76, 80
Waneta Development Co. 334
War in Mexico..... 179
Warren Brothers Co..... 30
Washington, Chehalis 370
  Colfax 168, 420
  Davenport.....78, 249, 335, 336
  Dayton 250
  Ellensburg 164, 252
  Endicott 422
  Harrington 420
  Highway improvements in..... 232
  Newport 337
  North Yakima....77, 84, 163, 164, 251, 252, 253, 338, 422
  Oylmpia 168, 248, 252
  Omak 337
  Oroville 84, 333, 334, 336, 422
  Pasco 166
  Pomeroy 335
  Ritzville 336, 504
  Seattle 76, 336
  Spokane.....162, 166, 168, 249, 251, 252, 333, 335, 338, 420, 424, 503, 505, 507, 508
  Tacoma 507
  Walla Walla....77, 78, 80, 164, 249, 336, 459
  Washtucna 336
  Wenatchee.....333, 335, 339, 420
Washington, D. C. 84
Washington Electric Railway Co..... 162
Washington Paving Co. 420
Washington Water Power Co. 503
Washtucna, Washington..... 336
Water and its cost per acre, and U. S. Reclamation Service..... 346
  Commission bill and Los Angeles..... 435
  Commission bill 434
  Per acre, cost of..... 379
  Power resources tributary to Salt Lake City, Utah—H. D. Randall... 283
  Ram, an experience with..... 230
  Rights, seriously affected, Chandler Dunbar Water Co. v. United States 429
  Supply of San Francisco and Spring Valley Water Co..... 436
Waterworks Supply Co., Los Angeles.... 164
Waterwheels, rules for conducting tests of 144
Watsonville, California 168
Weaverville, California 504
Wells, method of cementing-off water in drilling—Paul M. Paine..... 445
Wenatchee, Washington.....333, 335, 339, 420
Wenatchee Valley Gas & Electric Co..333, 334
West Coast Iron Co..... 337
West Sacramento Co. 77
West State Gas & Electric Co..... 242
Western Colorado Power Co. 334
Western Engineering and Esperanto..... 89
  Begins second year..... 267
Western oil, Diesel engines and..... 430
Western Pacific Railroad Co...68, 181, 338, 497
Western Pacific and Southern Pacific, joint use of track..... 429
Western Pacific, interest in Southern Pacific, Union Pacific, and Central Pacific merger troubles..... 266
Western Pipe & Steel Co.....77, 84, 340
Western States Gas & Electric Co.....75, 163, 175, 242
Whatcom Railway & Light Co..... 421
White, A. V.—Respecting water powers.. 139
White & Co., Inc., J. G. 160, 163
White, J. W.—Thermal efficiency equivalents 158
Whitefish, Montana..... 77
Whitham, Paul P.—Development of Seattle harbor..... 20
Williams Diesel engine in United States, San Francisco..... 432
Williamson, F. A.—Speed reducing gear for electric oil-well drilling..... 197
Willow, California.....75, 333, 338
Wilmington & San Pedro road..... 166
Windsor Water Co. 507
Winnemucca Northern Railway..... 162
Winters, California 75
Wishon, A. Emory—Electrifying the oil-fields 35
Wold & Kohn Co. 507
Wood, Chester Earl—Large volume metering of natural gas..... 125
Woodland, California.....70, 338, 422
Wright, T. J., Jr.—Diagram for area of railway culvert openings..... 245
Wyoming, petroleum news..... 509

Y

Yakima Valley Transportation Co..... 251
Yolo county, California, reclamation district No. 900..... 324
Yolo Water & Power Co.....422, 506
Yreka, California..... 423
Yreka Railway, valuation of..... 250
Yuba City, California..... 506
Yuba Consolidated Goldfields Co. 78
Yuba Farm Lands Lnvestment Co..... 251
Yuba Land Co. 164

Generated on 2024-09-30 00:09 GMT / https://hdl.handle.net/2027/uiug.30112007837781
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

WESTERN ENGINEERING

VOLUME 3

July to
December
1913

Western Engineering
420 Market Street San Francisco, Cal.

Generated on 2024-09-30 00:19 GMT / https://hdl.handle.net/2027/uiug.30112007837898
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from
UNIVERSITY OF ILLINOIS AT
URBANA-CHAMPAIGN

620.5
WE
v.3
cop.3

INDEX

A

Page.

Air compressors, care of..... 61
Flow through steel ducts 480
Alameda, California, street improvements 242, 405
Alcohol, denatured, as a decarbonizer and engine cleanser—Joseph A. Anglada 42
Alhambra, California, concrete bridge.... 325
Allen, Irving C.—Fuel for internal combustion engines 200
Alloy, acid-action resisting 62
Alta District Gas Co., Dinuba and Reedley gas plant note issue 403
Alta Planing Mill Co., Southern Pacific Arcade station, Los Angeles 325
Altour Creek railroad, Idaho 409
Alturas, California 244
Alvarez, Arthur C.—Strength of long-seasoned Douglas fir and redwood.. 303
Amador Electric Light & Power Co., bond and share issue 404
Amalgamated Oil Co., dividends increased 157
American Gas Co. and Rancho La Brea Oil Co. 322
Berkshire wells 240
American Gasoline Co., gasoline from casing-head gas 332
Shell interests in California—Review of the Month 90
American Institute of Quantity Surveyors, San Francisco Council—Review of the Month 256
American Mining Congress, Philadelphia convention—Editorial 85
American Petroleum Society 287
Editorial 250
American Water Works & Guarantee Co., reorganization 324
Amount of cement for concrete 230
Anglada, Joseph A.—Denatured alcohol as a decarbonizer and engine cleanser 42
Anticlinal dome structure in California oilfields—Dorsey Hager 196
Antioch, California, municipal water system 490
Apparatus to fight fuel fires—F. H. Mason 395
Aqueduct, Los Angeles and Natural Soda Products Co.—Review of the Month 420
Arbuckle, California, bridge construction 241
Arizona oilfield, possible—C. A. Botsford. 187
Arnold, B. H.—Fuel and lubricants for internal-combustion engines 369
Arnold, Bion J.—San Francisco transit facilities 40
Arnold, Ralph, and V. R. Garfias—Prevention of waste of oil and gas. 291
Ashton, Andrew—Wheeler Creek pipe-line 491
Ashton, Raymond—Trona railway..... 112
Asiatic Oil Co., tanker to Dutch East Indies 157
Asphalt obtained from oil—Editorial..... 86
Street surfaces, rational formula for —J. Alden Griffin 312
Associated Oil Co..... 80
And Shell-Royal Dutch oil interests —Review of the Month..... 89
Lorenzo, M. & S., and Columbia properties 157
Refinery at Avon 157
Storage tank burned 322
Atchison, Topeka & Santa Fe railway in California 404
Station building, Empire, California. 311
Atlas Construction Co., Walla Walla Waitsburg Highway 406
Atmosphere, investigation of the upper—J. Mascart 347
Australian railways 148
Ayres, Ernest F.—Huntington drive.... 356

B

Page.

Bakersfield, California 156, 321
Bond issue for county highways.... 158
Paved roads 77
Balzari, R. A.—Irrigation project of the Sacramento Valley Irrigation Co. 106
Barber Asphalt Co., and road construction specifications, New York—Review of the Month 420
Paving, Los Angeles 242
Paving, and road construction, Spokane, Washington 158, 243
Barrier, Edw. A.—Extinguishing fires in oils and volatile liquids..... 472
Bear Lake Power Co..... 76
Bear River National Forest, Utah, Utah Power & Light Co. v. U. S. Case—Review of the Month 419
Beaumont Gas & Power Co., mortgage note issue 160
Beaver River Power Co., and Idaho Power & Light Co..... 408
And Idaho Railway Light & Power Co. 488
Incorporated 327
Bell Locomotive Works, Yonkers, New York 482
Belt coating 314
Conveyors, power required for..... 480
Bending cast iron pipes 314
Berkeley, bonds for municipal improvements 80
Street improvements 77
Big Bear Valley dam, New—John S. Eastwood 458
Big Bend Rapid Transit Electric Railway Co., Narrows power site 488
Big Four Electric Co., capital stock increase 161
Big Valley reclamation project, California—Editorial 85
Bingham, Utah 77
Bingham & Garfield Railroad Co., articles of incorporation amended 77
Birch Oil Co., natural gas, Fullerton, California 407
Birchby, J. A., and E. S. Merriam—Examination of natural gas for the production of gasoline 374
Birchville Mining Co., water for power... 75
Bituminous concrete pavements—Wm. B. Spencer 379
Black Hawk Water Co., sold to Burlingame, California 311
Boathouse, Reinforced concrete pontoons for floating—D. C. Findlay..... 270
Boiler-feed pumps—Alfred Williams..... 476
Boise, Idaho 159, 408, 409, 488
Carey Act irrigation project 325
Roads 78, 243
State highways 406
Boise & Winnemucca railroad, Idaho.... 409
Bone & Lanning, Red Bluff, California, bridge, Reed Creek 487
Boston & Montana Development Co., charter filed 161
Botsford, C. A.—Possible Arizona oilfield 187
Boyle, J. C.—Klamath river hydro-electric development 52
Braun & Co., C. F., Sacramento pump contract 241
Braun, C. F.—Centrifugal pumps for irrigation 124
Ditto—Filter installation 319
Brea Gasoline Co., and Pacific Gasoline Co., production 321
Bricard, Raoul—Numbering systems..... 18
Bridge, Santa Ana reinforced concrete arch—W. M. Thomas 278
Tacoma waterway—John Lyle Harrington 28
Brigham City, Utah 326, 490
Concrete pipe factory 408
Sidewalks 323
Water works system 491
Bryan, J. H.—Erecting pumping engines. 478
Brytes Bend by-pass—Editorial 250
Buerger, C. B.—Friction losses in a check valve 230

35440:3

Generated on 2024-09-30 00:18 GMT / https://hdl.handle.net/2027/uiug.30112007837898
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.

Burbank Electric Light & Power Co., sale of plant 75, 311
Burners, Hauck portable 72
Business—Review of the Month..... 171
How is?—Editorial 4
Butte, Montana 161
Butte, Wisdom & Pacific Railway, charter filed 161

C

Cables carrying current, heating of—Saul Dushman 229
Calculation of stresses in plate girder spans—C. H. Marks 308
California, gasoline, casing-head in 1912. 485
Irrigated land boom—Review of the Month 90
Oil production, daily 321
Oilfields, Anticlinal dome structure in—Dorsey Hager 196
Oilfields, Cost of pumping oil by electricity in the—S. G. Gassaway.... 273
Oil-well drilling practice—B. K. Stroud 93
Public Utilities Act—Editorial 251
Reservoirs, Use and conservation of the underground—Charles H. Lee 189
Roads—S. J. Van Ornum 31
State Highway, bids 489
State Highway, construction proposals 157
State Highway, contracts 158
State Highway, Progress of the 142
State Railroad Commission, Inductive interference between power and communication lines 351
Water power development—Editorial. 249
California Development Co., water sale.. 79
California Mohawk Oil Co., dividend 485
California Oilfields, Ltd., and Royal Dutch-Shell interests—Review of the Month 173, 336
Coalinga wells shut down 486
California-Oregon Power Co., Thrall, California 160
Klamath river hydro-electric development 52
California Petroleum Corporation, development 321
Calistoga Electric Co., and Napa Valley Electric Co. 481
Callen Bros., piling, Mine Owners' Association contract 326
Camas Prairie railroad, improvements .. 242
Lewiston terminals 324
Campbell, Joseph—Catherine Creek bridge 326
Campbell & Hartman, concrete contract, Spokane 241
Canadian Pacific irrigation tract, Standard measuring weir of the..... 149
Canalization of the Columbia and Snake rivers—John H. Lewis 364
Capacity of screw conveyors 399
Carey Act irrigation project 325
Castle Dale, Utah, water works system, new 79
Castro Point Railroad, right-of-way disputes 409
Cat Canyon oilfield, Progress in the—Howard D. Smith 264
Cement for concrete, Amount of 230
Cementing-off water in drilling oil wells, Kammerer method of—Robert W. Phelps 360
Central California Gas Co., bond issue... 75
Company report 227
Centrifugal pumps for irrigation—C. F. Braun 124
Pumps, power lost by skin friction.. 480
Chain belt paving mixer 232
Channels, Kutter's coefficient 'N' for open 221
Check valve, Friction losses in a—C. B. Buerger 230
Chicago, Milwaukee & St. Paul Railroad, electrification 487
Chico, California 80, 163, 325
Irrigation project in Paradise section 78, 324
Roads 322

Page.

Chico Construction Co. 80
Bridge construction 241, 325
Dam construction 163, 325
Citizens Heat & Power Co., Salt Lake City, franchise application 488
City & Suburban Investment Co., and J. W. Bloom water system, Daly City 481
City Garden Water Co., incorporated 244
Clark & Henery Construction Co., paving, Colusa, California 158
Suction dredge, Oakland 325
Clays, Melting point of firebricks and 230
Clear Lake Railroad Co., new construction 161, 486
Coal conversion into electricity, losses... 150
Versus oil in California—Editorial.. 332
Coalinga, California 322
Coalmont & Coquilhalla Railroad, extension in Canada 242
Coast Bridge Co., bridge construction, Davenport, Wash. 241
Coast Counties Light & Power Co., report 59
Cochrane, C. A. and water-works system, Priest River, Idaho 325
Coeur d'Alene, Idaho, municipal ownership, lighting facilities 327
Colfax, Washington, city hall contracts.. 241
Paving and streets 78, 242, 323
Collins, Arthur L.—Farmer and the power companies 237
Columbia and Snake rivers, Canalization of the—John H. Lewis 364
Columbia Oil Producing Co. 238
Colusa, California 407
Bonds for new improvement 81
Levee construction 408
Paving 158
Road improvements 77
Combined standard drilling rig—W. B. Wiegle 402
Comparative costs in road and pavement work—Fred L. MacPherson 299
Competition—Editorial 251
Compressors, air, care of 61
Concanon, M. and Newville and Shelton bridges 487
Concrete, Amount of cement for..... 230
As a paving material—W. C. Hammatt 194
Pavements, Bituminous — Wm. B. Spencer 379
Roads—George Nelson 317
Socket piling—K. D. MacLean 117
Wharves versus wood—Norman M. Halcombe and Jerome Newman. 234
Condit plant of Northwestern Electric Co. 339
Continental Construction Co., freight depot, Ogden 326
Conveyor, Capacity of screw 399
Power required for belt 480
Spiral, formula for horse-power..... 229
Cooks Water Works, sold to Colusa 407
Correspondence instruction, University of California—Editorial 3
Corrosion or iron and steel, a method of preventing 387
Corrugated iron pipe 233
Cost of generating power with Diesel oil-engines—Gordon Kribs 215
Of pumping oil by electricity in the California oilfields—S. G. Gassaway 273
Of reporting on an irrigation project—Charles Kirby Fox 267
Costs in road and pavement work, Comparative—Fred L. MacPherson... 299
Coulee City, Washington, roads 78
Covington & Robings, road construction, Willows, California 322
Creating a municipality—George Nelson. 447
Crummey Construction Co., Dublin-Livermore boulevard, Oakland 158
Currency bill in Senate—Review of the Month 417
Law—Review of the Month 335
Current, Heating of cables carrying—Saul Dushman 229
Cykler, E. F.—Y. M. C. A. building, San Diego 179
Cylindrical surfaces, water-pressure on .. 62

Generated on 2024-09-30 00:17 GMT / https://hdl.handle.net/2027/uiug.30112007837898
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

D

Page.

Dam, Calaveras, Spring Valley Water Co. —Review of the Month..... 338
New Big Bear Valley—John S. Eastwood 458
Ultimate—John S. Eastwood 175
Daniel Contracting Co. 80
Davenport, Washington 160
Bridge construction 241
Highway 406
New sewer 241, 326
Davis, California 407, 490
Davis County Light & Power Co. 76
Davis Water Co. 407
City water system 490
Share issue 404
Water plant purchase 78
Dawley, J. W.—Diesel oil-engine operation 475
Dayton, Washington, highways 242
Decarbonizer and engine cleanser, denatured alcohol as a—Joseph A. Anglada 42
Density, Energy—Charles P. Steinmetz.. 141
Denver, Colorado, Moffat tunnel 326, 409
Uncompahgre project 79
Denver & Rio Grande Railroad Co. 81
And Utah Coal Railroad 242
Report for year ended March 31, 1912 59
Utah extension 409
Utah industrial improvement 162
Diesel engineers, Instructions for—John Pierce 305
Engine operation—J. W. Dawley 475
Engines, Cost of generating power with—Gordon Kribs 215
Engines in the United States—H. Haas 163
Diesel, Rudolph, death of 410
Dock and wharf construction, San Francisco—Jerome Newman 11
Dome structure in California oilfields, Anticlinal—Dorsey Hager 196
Douglas fir and redwood, Strength of long-seasoned—Arthur C. Alvarez 303
Dovey, J. Thomas—Engineers' Club of Seattle 286
Downieville, California, new road 158
Dozier Construction Co., bridge, Slate creek 162
Drilling oil wells, Kammerer method of cementing-off water in—Robert W. Phelps 360
Practice, California oil-wells—B. K. Stroud 93
Rig, Combined standard — W. B. Wiegle 402
Ducts, flow of air through steel 480
Durand, W. F.—Investigation of surge phenomena by means of model experiments 421
Dushman, Saul—Heating of cables carrying current 229
Dwight, H. B.—Maximum loads of transmission lines 388

E

Eastern Oregon Co-operative Telephone Association, bond issue 160
Eastwood, John S.—New Big Bear Valley dam 458
Ditto—Ultimate dam 175
Eldorado national forest, Truckee River General Electric Co. water power permit—Review of the Month.... 337
Electric system, Modoc and Lassen counties, contemplated 481
Electricity, coal conversion into, losses... 150
In the California oilfields, Cost of pumping oil by—S. G. Gassaway. 273
Electrolysis from stray electric currents —Albert F. Ganz 57
Elgin, Oregon 160
Ellis Dock & Landing Co. 80
El Paso & Southwestern Railroad Co., six companies consolidated 77
Empire Water Co., bond issue 404
Endicott, Washington, water works, municipal 79
Energy density—Charles P. Steinmetz ... 141
Engine cleanser, and decarbonizer, denatured alcohol as a—Joseph A. Anglada 42

Page.

Diesel oil, Cost of generating power with—Gordon Kribs 215
Diesel oil operation—J. W. Dawley... 475
Erecting pumping—J. H. Bryan..... 478
Fuel and lubricants for internal-combustion—B. H. Arnold 369
Fuel for internal-combustion—Irving C. Allen 200
Internal-combustion, Jacket-water requirements of—Reginald Trautschold 217
New oil, installation of 284
Practical hints on the management of small oil—P. J. Haler and H. T. Wright 228
Engineering Congress, International, 1915 —Review of the Month 89
Engineers' Club of Seatle—J. Thomas Dovey 286
Erdman act, Newlands bill—Editorial.... 86
Erecting pumping engines—J. H. Bryan.. 478
Erickson, Halford—Regulation of public utilities in Wisconsin 223
Eugene, Oregon, Portland, Eugene & Eastern Railroad 324
Eureka, California, road to Redding..... 489
Eureka, Montana, sewer system and water extension 326
Examination of natural gas for the production of gasoline—E. S. Merriam and J. A. Birchby 374
Experimental values of Kutter's coefficient 'N' for open channels 221
Extinguishing fires in oils and volatile liquids—Edw. A. Barrier 472

F

Fair ranch, Woodland irrigation system. 78
Fairchild, Gilmore, Wilton Co., paving, Los Angeles 242
Fall River Mills, California 325
Fan, power to drive 150
Farmer and the power companies—Arthur L. Collins 237
Welfare of the—Editorial 333
Farmington, Utah 76
Feeder for boiler graphite, Satisfactory.. 482
Filter installation—C. F. Braun 319
Findlay, D. C.—Reinforced concrete pontoons for a floating boathouse.... 270
Firebricks and clays, Melting point of.... 230
Fires, Apparatus to fight liquid fuel—F. H. Mason 395
In oils and volatile liquids, Extinguishing—Edw. A. Barrier 472
Flume trestle in Idaho, high—A. M. Korsmo 55
Folsom, California 160
Forman, Michael, and road construction, Willows, California 242
Fort Bidwell, California, Fee dam enlargment 491
Foster & Hindle, highway, Washington.. 323
Fowler Mfg. Co., J. P., new machine shops 162
Fox, Charles Kirby—Cost of reporting on an irrigation project 267
Fresno, California 407
Electric railroad to Clovis 323
New irrigation district 324
Fresno Canal Irrigation Co. 324
Friction losses in a check valve—C. B. Buerger 230
Fuel and lubricants for internal-combustion engines—B. H. Arnold.. 369
Consumption in motor-ships 297
For internal-combustion engines—Irving C. Allen 200
Fullerton, California, natural gas 407

G

Gamboa dike, destroyed—Review of the Month 335
Ganz, Albert F.—Electrolysis from stray electric currents 57
Garfias, V. R., and Ralph Arnold—Prevention of waste of oil and gas.. 291
Garfield Water Co., water supply, Garfield 407
Gas, Examination of natural for the production of gasoline—E. S. Merriam and J. A. Birchby 374

Generated on 2024-09-30 00:19 GMT / https://hdl.handle.net/2027/uiug.30112007837898
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.

Prevention of waste of oil and—Ralph Arnold and V. R. Garfias 291
Pump installation, Humphrey 205
Gasoline, casing-head, U. S. and California production in 1912 485
Drop in price—Review of the Month.. 90
Examination of natural gas for the production of—E. S. Merriam and J. A. Birchby 374
Manufactured from casing-head gas —Editorial 332
Versus horse—Editorial 85
Gassaway, S. G.—Cost of pumping oil by electricity in the California oilfields 273
Gates & Rogers Construction Co. 323
Gay & Teal, Willows, California, contract 322
Geary Street Municipal Railway 227
General Petroleum Co. and Independent Producers' Agency 239
And Royal Dutch-Shell interests—Review of the Month.....336, 418
Condition of property 239
Daily output 157
Drilling in West Side fields 240
Holdings and London syndicate—Review of the Month 418
Pipe-line 156, 322
Pipe-line to Mojave—Review of the Month 89
General Pipe Line Co. and General Petroleum Co.—Review of the Month 419
South American fuel trade 157
General Service Corporation, gas plant, Ogden, Utah 161
Geology, Structural, south of the Santa Susana district — Clarence A. Waring 470
Gilkerson Construction Co., sewer construction, Salt Lake City 406
Gilmore, A. F., gasoline from casing-head gas 332
Girder spans, Calculation of stresses in plate—C. H. Marks 308
Glendale Consolidated Water Co., meters. 163
Goethals, Colonel George W., made president of the International Engineering Congress, 1915—Review of the Month 89
Graessler, Ernest, and Chico septic tank. 325
Grant, Smith & Co., Spokane union depot. 326
Graphite, Satisfactory feeder for boiler.. 482
Grass Valley, California, water system... 325
Gravenhage Syndicate, Ltd., Oklahoma... 238
Gray & Co., Owen H., dam construction, Salt Lake City 241
Great Britain and Panama-Pacific International Exposition—Editorial... 167
Great Falls, Montana, Sun River diversion dam 491
Great Western Power Co., and Big Meadows power project—Review of the Month 92
Antioch operations 160
Big Bend plant 327
Company report 59, 151
Dam at Nevis 75
Electricity flat rate discontinued 160
Improvements 243
Green & Co., C. H. 79
Greenville, California 75
Gridley, California, Myers pumping plant 491
Sewer system 240
Griffin, J. Alden—Rational formula for asphalt street surfaces 312
Guthrie-McDougall Co., bridge contract, Spokane 241
Reinforced concrete arch and bridge filling, Spokane 487

H

Haas, H.—Diesel engines in the United States 163
Hager, Dorsey—Anticlinal dome structure in California oilfields 196
Halcombe, Norman M. and Jerome Newman—Wood v. concrete 234
Haler, P. J. and H. T. Wright—Practical hints on the management of small oil-engines 228
Halfmoon Bay Light & Power Co., rate change 481
Hall, Frank, gasoline manufactured from casing-head gas 332
Hammatt, W. C.—Concrete as a paving material 194
Hammers, pneumatic, and concrete compacting in forms—Editorial 6
Hangman Creek bridge, Spokane—Editorial 331
Harbor Improvement Bureau, Los Angeles 161
Harriman railroad merger, dissolved—Review of the Month 7
Harrington, John Lyle—Tacoma waterway bridge 28
Hartness & Norris, viaduct, Spokane, Washington 241
Hassam Paving Co., O. W. R. R. & N. Co. contract 324
Hauling, cost of, with tractor outfits on Illinois road construction 58
Heating of cables carrying current—Saul Dushman 229
Heise, C. E. and G. B. Kirker—Oakland, Antioch & Eastern Railway 384
Helena, California 489
Helena, Montana, electricity rates investigation 488
Hemet-San Jacinto Gas Co., bond issue.. 403
Herington, Kansas, water-works improvements 81
Hermosa Beach, California, Creating a municipality—George Nelson 447
Hetch-Hetchy and San Francisco—Review of the Month 8, 254
And Wall Street Journal—Editorial.. 168
In the Senate—Editorial 413
Highway, Progress of the California State 142
Tax, A logical—B. G. Marshall..... 315
Hihn Water Co., stock issue 311
Hillyard, Washington, water mains 491
Holman Bros., sidewalks, Provo, Utah.... 323
Holton Power Co., report, year ended Dec. 31, 1912 59
Hooper Canal Co., dam and reservoir.... 79
Horse v. gasoline—Editorial 85
Hughes Flume Co., water meters, Spokane 325
Hulme & Spaeth, La Grande, Oregon, school building 243
Humboldt-Siskiyou & Klamath Railroad Co., incorporated 77
Humphrey gas pump installation 205
Huntington Beach, California, street bond issue 322
Sewer system 240
Huntington drive—Ernest F. Ayres 356
Hurley-Smith-Callins Co., gasoline from casing-head gas 332
Hydro-electric development, Klamath river—J. C. Boyle 52
Power development in the Pacific Northwest—Review of the Month 256

I

Idaho and Washington, Lewiston-Clarkston bridge—Review of the Month 174
State Highway Commission, National Highway 159
Idaho Falls, Idaho, electric railroad, new. 487
Idaho-Oregon Light & Power Co. and Idaho Traction Co. 488
Idaho Power & Light Co. and Beaver River Power Co. 408
Idaho Railway Light & Power Co. and Beaver River Power Co. 488
Idaho Traction Co., holdings 488
Idaho-Washington Light & Water Co. and Washington Water & Power Co... 160
Imperial, California, bond issue, highways 322, 405
Imperial Valley Water Co., No. 3, water purchase 78
Income tax—Review of the Month 253
Independent Paving Co., paving, North Yakima, Washington 323
Independent Oil Producers' Agency 157, 238, 239, 485
Indio Light, Water & Ice Co., sells property 403
Inductive interference between power and communication lines 351
Inland Empire Hassam Paving Co. 323
Inland Empire Paper Co. 81

Generated on 2024-09-30 00:17 GMT / https://hdl.handle.net/2027/uiug.30112007837898
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.

Instructions for Diesel engineers—John Pierce 305
For laying machine-banded wood-stave pipe 396
Interference, Inductive, between power and communication lines 351
Internal-combustion engines, Fuel and lubricants for—B. H. Arnold.... 369
International Engineering Congress, 1915—Review of the Month 89
International Power & Manufacturing Co. and hydro-electric power development in Pacific Northwest—Review of the Month 256
Investigation of surge phenomena—Editorial 413
Of surge phenomena by means of model experiments—W. F. Durand 421
Of the upper atmosphere—J. Mascart. 347
Iron and steel, Method of preventing corrosion of 387
Iron Canyon irrigation project, lands withdrawn 491
Reservoir and irrigation project..324, 407
Irrigated lands, government and unprincipled land speculators—Editorial 414
Irrigation, Centrifugal pumps for—C. F. Braun 124
Power companies and—Editorial..... 87
Project, Cost of reporting on an—Charles Kirby Fox 267
Project of the Sacramento Valley Irrigation Co.—R. A. Balzari.... 106
Project, Tumalo, Oregon—Editorial.. 3
Projects, Reclamation Service—Editorial 331

J

Jacket-water requirements of internal-combustion engines — Reginald Trautschold 217
Japan as a petroleum producer—Review of the Month 338
Johnson & Stewart, paving, Nephi, Utah.. 242
Johnson railroad, Lewiston, Idaho 409
Bond issue 487

K

Kammerer method of cementing-off water in drilling oil wells—Robert W. Phelps 360
Kaysville, Utah, concrete highway 242
Kellogg, Idaho 326
Bond issue for new sewers 81
County road construction 490
Sewer construction 162, 241
Kelly-Atkinson Co. 81
Spokane River-Hangman Creek bridge 408
Kelly, C. H., sewer system, Eureka, Montana 326
Kelly, Thomas, water extension, Eureka, Montana 326
Kennedy Construction Co., James, water mains, Hillyard, Washington 491
Keno, Oregon, Klamath river electric power plant 327
Keokuk hydro-electric power project—Editorial 249
Kern County Protective Association, safeguarding the oilfields 168
Kern national forest, Southern California Edison Co., hydro-electric plants—Review of the Month 337
Kern Trading & Oil Co., gas-compressor.. 322
Midway field gusher 485
Oil storage reservoirs 485
Keys and how to remove them—George Rice 313
Kirker, G. B., and C. E. Heise—Oakland, Antioch & Eastern Railway 384
Klamath Falls, Oregon 75
Klamath Reclamation project 79, 244
Municipal power-plant 407
Klamath river hydro-electric development—J. C. Boyle 52
Korsmo, A. M.—High flume trestle in Idaho 55
Kribs, Gordon—Cost of generating power with Diesel oil engines 215
Kutter's coefficient 'N' for open channels, Experimental values of 221

L

Page.

Lacey Co., H. G., note issue.....243, 311
La Grande, Oregon 326
Central school building 243
Paving 242
Land boom, irrigated, California—Review of the Month 90
Lands, government irrigated and unprincipled land speculators—Editorial 414
Lane, Franklin K., beneficial results of Western tour—Editorial 331
Lassen Electric Co., and Branahan power plant 75
Le Doux & Le Doux, bridge construction, Spokane 241
Lee, Charles H.—Use and conservation of the underground reservoirs of California 189
Lee, Francis Valentine Toldervy, death of 320
Lehigh, Utah 79
Levels, new method for taking 72
Lewis, John H.—Canalization of the Columbia and Snake rivers 364
Lewiston, Idaho 242, 324, 326, 487
Johnson railroad 409
Roads 243
Lewiston-Clarkston bridge, Washington and Idaho—Review of the Month 174
Light and power plants, Seattle 140
Lindsay Home Telephone & Telegraph Co., share issue 404
Livingston, Montana, water-works plant. 81
Locomotive, Oil-burning contractor's..... 482
Lodi, California, gas plant, municipal 243
Logan, Utah, electric railroad 324
Logical highway tax—B. G. Marshall 315
Long Beach, California, concrete pier 408
Tide damage 162
Long Beach Consolidated Gas Co., company report 151
Los Angeles, California .....
.....76, 80, 161, 240, 241, 324, 486
And natural gas—Review of the Month 254
Conduit ordinance 160
Garbage disposal 240, 250
Gas rate 75
Harbor boulevard 158, 325
Huntington drive—Ernest F. Ayres.. 356
Municipal power-bonds—Editorial ... 3
North Highland Park sewer system.. 408
Palo Verde Valley railroad 323
Paving 242
Railroad, municpal harbor terminal.. 81
Versus Natural Soda Products Co., Los Angeles aqueduct—Review of the Month 420
Water mains on Capital hill 78
Water rights on Rush creek and E. G. Ryan—Editorial 332
Wharf in Mormon Island channel 161
Los Angeles & San Diego Beach Railroad Co., notes issued 76
Los Angeles & San Joaquin Valley Railroad. incorporated 241
Los Angeles Gas & Electric Co., company report 151
Los Molinos Construction Co., dam, Mill creek 240
Los Verjels Land & Water Co., dam in Dry creek 325
Dam in Marsh creek 162
Lubricants and fuel for internal-combustion engines—B. H. Arnold... 369
Lynch & Canon Engineering Co., Oregon Short Line shops, Pocatello 324

M

MacLean, K. D.—Concrete socket piling.. 117
MacPherson, Fred L.—Comparative costs in road and pavement work 299
Mahoney Bros., Fresno railroad 323
Mailliard estate, water rates raised 311
Manhattan Beach, California, cement walk and retaining wall 325
Mare Island channel 240
Marks, C. H.—Calculation of stresses in plate girder spans 308
Marshall, B. G.—Logical highway tax.... 315
Martinez, California, tunnel road 242

Generated on 2024-09-30 00:18 GMT / https://hdl.handle.net/2027/uiug.30112007837898
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.

Marysville, California 77, 243
Bridge, Yuba river 162
Reclamation District No. 876 244
State highway bonds 405
Mascart, J.—Investigation of the upper atmosphere 347
Mason, F. H.—Apparatus to fight liquid fuel fires 395
Massie & Sons, J. P., Tisdale ranch..... 407
Mathematics, Practical 393
Maximum loads of transmission lines—H. B. Dwight 388
Mayberry, Edward L.—Reinforced concrete oil tank 37
Mays Oil Co. and Royal Dutch-Shell interests—Review of the Month... 336
Measuring the sewage of Sacramento.... 300
Melting point of firebricks and clays 230
Meridian, California 77, 407
Merriam, E. S., and J. A. Birchby—Examination of natural gas for the production of gasoline 374
Method of preventing corrosion of iron and steel 387
Mexican Petroleum Co., large contracts.. 157
Midland Canal Irrigation Co., incorporated 78
Midway Gas Co. 238
And Southern California Gas Co., Los Angeles and natural gas—Review of the Month 254
Compressors in oilfield 75
Taft gas-compressing plant 322
Midway-Sunset fields, new oil wells 485
Milton, Oregon, arc light system 327
Grading 489
Minnesota rate case—Editorial 5
Miradero Water Co., meters 162
Missoula Light & Water Co., electric rates investigation 488
Modesto Gas Light, Coal & Coke Co., report 59
Moffatt tunnel, Colorado 326, 409
Mokelumne river, widening of mouth..... 240
Montague, California 244
Bond issue, water system, irrigation project, 12 districts 490
Montana Power Co., Coeur d'Alene district, Idaho 75
Electric rates investigation 488
Monte Cristo Oil & Development Co., company report 481
Fullerton field property 485
Moon, J. L.—Transformer capacity and connections for induction-motor feeder-circuits 146
Moran Co., P. J. 78
Paving, Salt Lake City 242, 405
Moscow, Idaho 408
Paving and streets 243, 323, 490
Motor, induction, safegarding the 68
Ships, Fuel consumption in 297
Spirits—Review of the Month 255
Mt. Jackson Water & Power Co., bond issue 75, 160
Mount Whitney Power & Electric Co., report 59
Mountain Power Co., Crescent City water works 160
Mountain States Tel. & Tel. Co., industrial improvements 162
Municipal power-bonds, Los Angeles—Editorial 3
Municipality, Creating a—George Nelson 447
Murphy Oil Co. 238
And Standard Oil Co. 485
Myriawatt—Editorial 167

N

Napa, California, bond issue..... 408
Bridge construction 240
Roads 77, 242, 322
Napa Valley Electric Co., and Calistoga Electric Co. 481
Bond issue 407
National Highway in Idaho 159
National steel tubing 233
Natomas Consolidated, bond holders consent solicited 490
Natural Soda Products Co. v. Los Angeles, L. A. Aqueduct—Review of the Month 420
Nelson, George—Concrete roads 317
Ditto—Creating a municipality 447

Page.

Nelson Gas & Coke Co., plant sold to Nelson, B. C. 488
Nephi, Utah, paving 242
Netherlands Farms Co., Yolo Basin, California, Reclamation work of the—Fred H. Tibbetts 431
Nevada-California Power Co., and Southern Sierra Power Co. 488
Nevada City, California 75
Nevada County Narrow Gauge railroad, bond issue 76
New Big Bear Valley dam—John S. Eastwood 458
New Era Irrigation Co., incorporated 491
New Mexico, Underground water in Tularosa basin 203
New oil engine installation 284
New York, road construction specifications—Review of the Month.... 420
New York, New Haven & Hartford Railroad, troubles—Editorial 167
Newlands arbitration act—Review of the Month 417
Southern Pacific Co., and Oakland-Alameda line—Review of the Month 335
Ditto—Editorial 86
Newman, Jerome—San Francisco wharf and dock construction 11
Ditto and Norman M. Halcombe—Concrete v. wood 234
Newspaper reports, inaccuracies—Editorial 167
Nippon Oil Co., Kashiwazaki, Echigo, Japan—Editorial 85
North Yakima, Washington..244, 324, 407, 488
Bond issue for sewer system defeated 162
Cascade scenic highway 159
Irrigation project 163
Paving 323
Pipe-line 79
Northern Electric Railroad Co., Feather river bridge 487
Marysville-Colusa branch, Colusa-Woodland branch 77
Vacaville line 486
Northern Idaho & Montana Power Co., electric rates investigation 488
Northern Pacific Railroad, Clearwater River bridge 326
Ellensburg to Ritzville line 487
Northwestern Electric Co., Condit plant of 339
Northwestern Pacific Electric Railroad, extension 409
Numbering systems—Raoul Bricard 18

O

Oakland, California, Dublin-Livermore boulevard 77, 158
Suction dredge 325
Oakland-Alameda line, S. P. Co., and wage scale—Review of the Month 335
Oakland, Antioch & Eastern Railway—C. E. Heise and G. B. Kirker 384
And Western Pacific Railroad Co.—Review of the Month 418
Bond issue 76, 241
Chipps Island bridge 408
Occidental Oil Co., and Sunset Monarch Oil Co. 157
Ogden, Utah..... 79, 160, 243, 326, 408
Bond issue, dam construction 245
Municipal water-works system 163
Paving 78, 159, 242, 322, 406, 490
South Fork dam 325
Wheeler Creek pipe-line 491
Ogden-Logan Electric, industrial improvement 162
Ogden Rapid Transit Co., paving, Ogden. 406
Oil and gas, Prevention of waste of—Ralph Arnold and V. R. Garfias.. 291
Burning contractor's locomotive 482
Crude, shipping and sampling—Paul M. Paine 22
Fields, Midway-Sunset, new wells... 485
Fuel, Admiralty specification 314
Gravity of 239
Land protection bill, Sutherland—Editorial 3
News, see petroleum .....
Protective Association, Kern county, California—Editorial 85

Generated on 2024-09-30 00:20 GMT / https://hdl.handle.net/2027/uiug.30112007837898
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.

Situation and Royal Dutch-Shell interests in California—Review of the Month 336
Versus coal in California—Editorial. 332
Well drilling practice, California—B. K. Stroud 93
Wells, Kammerer method of cementing-off water in drilling—Robert W. Phelps 360
Oil-engines, Practical hints on the management of small—P. J. Haler and H. T. Wright 228
Oilfield, Posible Arizona—C. A. Botsford. 187
Progress in the Cat Canyon—Howard D. Smith 264
Oilfields, Anticlinal dome structure in California—Dorsey Hager 196
Cost of pumping oil by electricity in the California—S. G. Gassaway.. 273
Safeguarding the—Editorial 168
Ojai Power Co., water business 311
Olinda Gasoline Co., gasoline from casing-head gas 332
New plant 240
Refrigeration process for gasoline extraction 157
Olympia, Washington 243, 406
Lewiston bond issue and friendly suit 326
Roads 243, 489
Smoke stack, Hospital for Insane 241
State roadways 323
Omak, Washington, pavement 242
O'Neil Construction Co., J. T., paving, Ogden 322
Opportunity, Washington 81
Oregon City, Oregon, sewer construction. 241
Oregon, Tumalo irrigation project—Editorial 3
Oregon Bridge & Construction Co., Waukee, bridge construction..... 487
Oregon Short Line, industrial improvement 162
Oregon-Washington Railroad & Navigation Co. 81
Cascade mountain extension 324
Excavating 323
Improvements 161
New freight terminals 162
New railroad lines 486
Spokane improvements 409
Spokane River - Hangman Creek bridge 408
Versus Spokane—Review of the Month 91
Orient, Washington, Kettle River road.. 406
Orland, California 324
Feed canal 407
Orland Irrigation Project 324
Oro Electric Corporation, bond issue.... 75
In Stockton 243
Plumas National Forest 243, 244
Oroville, California 327
Bridge construction 162, 241, 487
Crain ranch 407
Hydro-electric power-plant 407
Irrigation district, new 78, 491
New road 158
Outer Harbor Dock & Wharf Co. 325
Outlet sewer of 24-inch corrugated iron culvert pipe at El Paso, Texas... 219
Ozone and its applications 64

P

Pacific Electric Railroad Co., elevated railroad system proposed 76
Grading 75
Municipal street railroad from Los Angeles to San Pedro 161
Redondo Beach wharves 404
Pacific Gas & Electric Co., and United Water & Power Co. 160
Flat rate electricity discontinued.... 160
Folsom plant 160
Lake Spaulding power project 413
Mortgage bonds 75
New gas holder 243
Note and bond issue 311
Railroad construction 76
Water rights 75
Pacific Gasoline Co., and Brea Gasoline Co., production 321
Gasoline from casing-head gas 332
Pacific Light & Power Corp., company report 151

Page.

Fire damage 407
Sierra national forest power plants.. 160
System—B. P. Rowe 288
Pacific Pipe Line Co. 238
Pacific Power & Light Co., in Pomeroy, Washington 408
Reservoir, North Yakima 244
Valuation of electric service 488
Pacific Telephone & Telegraph Co., and Farmington, California 311
Portola telephone exchange plant.... 404
Paine, Paul M.—Shipping and sampling crude oil 22
Palo Verde Irrigation Co., extension to system 324
Palo Verde valley railroad 323
Palouse, Washington 326
Water mains 491
Panama canal, Gamboa dike destroyed—Review of the Month 335
Panama-Pacific International Exposition. 81
And Great Britain—Editorial 167
Exhibitors—Review of the Month.... 9
Exhibitors book of rules—Review of the Month 174
Petroleum exhibit at the—Editorial.. 169
Progress 163
Park City, Utah, electric light plant..... 76
Parker, Edward W., oil v. coal in California—Editorial 332
Pavement, non-skid, San Francisco—Editorial 167
Bituminous concrete—Wm. B. Spencer 379
Paving material, Concrete as a—W. C. Hammatt 194
Mixer, chain belt 232
Payne, C. M., paving, Spokane 406
Payson, Utah, water works system..... 163
Peart & Sanders, levee construction, Colusa 408
Peck, daho, new road 159
Pend Oreille river, Washington, power rates to corporations—Editorial.. 169
Pendleton, Oregon, paving 323
Thorne Hollow water system 163
Petram & Lotterburger, Orofino Portland Cement Co., machine-shop building 326
Petroleum dividends, California fields.... .....74, 155, 238, 405
Engineering—Editorial 250
Exhibit at the Panama-Pacific Exposition—Editorial 169
Japan as a producer of—Review of the Month 338
Operation statistics, California fields. 74
Production, by states in 1912 156
Production, California, daily 321
Production, California field...73, 155, 405
Production in United States—Editorial 85
Products in Europe—Robert P. Skinner 39
Products, manufacture of—F. C. Robinson 47
Resources, Bondoc peninsula, Tayabas province, Philippine Islands..... 444
Shipment, May, 1913 73
Storage statistics, California fields... 74
Petroleum Society, American 287
Ditto—Editorial 250
Petroleum Development Co., refrigeration plant for gasoline extraction 157
Phelps, Robert W.—Kammerer method of cementing-off water in drilling oil wells 360
Philippine Islands, Petroleum resources, Bondoc peninsula, Tayabas province 444
Phoenix, Arizona 77
Phoenix Construction Co., Utah 326
Pierce, John—Instructions for Diesel engineers 305
Piling, Concrete socket—K. D. MacLean. 117
Pinal Dome Refining Co. 238
Gasoline from casing-head gas..... 332
Pipe, Corrugated iron 233
Instructions for laying machine banded wood stave 396
Pipes, Bending cast iron 314
Pit River Power Co., Burney Falls water. 488
Fall River valley 325
Power system 243
Placerville, California 326
Plagge, A. A., bridge, Chico 241

Generated on 2024-09-30 00:19 GMT / https://hdl.handle.net/2027/uiug.30112007837898
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.

Pocatello, Idaho, New street car system proposed 77
Pavements 78
Road construction 406
Pomeroy, Washington 408
Roads 323
Pomona, California, bond issue, new roads 405
Pontoons, Reinforced concrete, for a floating boathouse—D. C. Findlay.... 270
Porter Bros., bridge at Glavin 487
Portland, Oregon 161, 486
Portland, Eugene & Eastern Railroad.... 324
Possible Arizona oilfield—C. A. Botsford.. 187
Power and light plants, Seattle 140
Bonds, municipal, Los Angeles—Editorial 3
Companies and irrigation—Editorial. 87
Companies, Farmers and the—Arthur L. Collins 237
Development, United States government permits for 209
Rates on water rights to corporations —Editorial 169
Required for belt conveyors 480
To drive fan 150
Power & Irrigation Co., Clear Lake reservoir 78
Practical hints on the management of small oil-engines—P. J. Haler and H. T. Wright 228
Mathematics 393
Prairie Oil & Gas Co., common-carrier law—Review of the Month..... 173
Prevention of waste of oil and gas—Ralph Arnold and V. R. Garfias 291
Priest River, Idaho, bond issue, water supply system 245, 325
Progress in the Cat Canyon oilfield—Howard D. Smith 264
Of the California State Highway.... 142
Provo, Utah 327, 407, 491
Dam construction 326
Pier construction 408
Sidewalks 323
Provo River Reservoir Co..... 79
Puente Oil Co., gasoline from casing-head gas 332
Pullman, Washington, bond issue, paving 406
Paving 242, 489
Road building 159
Water supply system 244
Pump installation, Humphrey gas 205
Pumps, boiler-feed—Alfred Williams.... 476
Centrifugal, power lost by skin friction 480
For irrigation, centrifugal—C. F. Braun 124
Purity Gasoline Co., gasoline from casing-head gas 332

Q

Quantity Surveyors, San Francisco Council of American Institute—Review of the Month 256
Quincy, California 78
Bridge construction 162
Electric plant destroyed 160
Quincy, Washington, bond issue, Quincy irrigation project 163
Quincy Water Works 78

R

Railways, Australian 148
Rancho La Brea Oil Co., and American Gas Co. 322
Rate case, Minnesota—Editorial 5
Rational formula for asphalt street surfaces—J. Alden Griffin 312
Raymond Concrete Pile Co., Oregon-Washington R. R. & N. Co., contract 326
Reclamation project, Big Valley, California—Editorial 85
Project, Sutter Basin 257
Service, irrigation projects—Editorial 331
Work of the Netherlands Farms Company, Yolo Basin, California —Fred H. Tibbetts 431
Red Bluff, California.....78, 240, 486, 487, 491
Iron Canyon reservoir project 324
Municipal water system 407

Page.

Redding, California 325, 488
Bond issue to erect bridge 80
Bridge construction 240, 408, 487
Road to Eureka 489
Redlands, California, municipal water supply 324
Municipal water and lighting service 244
Redwood and Douglas fir, strength of long-seasoned—Arthur C. Alvarez 303
Reedley, California, water and sewer improvements 325
Regulation of public utilities in Wisconsin—Halford Erickson 223
Reinforced concrete pontoons for a floating boathouse—D. C. Findlay.... 270
Reno, Nevada 160, 241
Irrigation dam 163
Republic, Washington 323
Highway 242
Reservoirs of California, Use and conservation of the underground—Charles H. Lee 189
Reward Oil Co..... 75
Rice, George—Keys and how to remove them 313
Richmond, California 409
Channel, municipal 80
Inner harbor improvement project... 408
Municipal tunnel and highway..... 487
Paving 405
Water supply 407
Rio Vista project, flood control..... 244
Ritzville, Washington, paving 243
Riverside, California, bond issue for municipal water system 404
Bond issue, new roads 405
Concrete road 242
Water system, municipal..... 79
Riverside Artesian Water Co., to sell system 404
Riverside Portland Cement Co..... 405
Road and pavement work, comparative costs in—Fred L. MacPherson... 299
Construction—A. C. Root 477
Construction specifications, N. Y.— Review of the Month..... 420
Filler required 480
Maintenance, tax—Editorial 249
Roads, California—S. J. Van Ornum..... 31
Concrete—George Nelson 317
Robinson, F. C.—Manufacture of petroleum products 47
Root, A. C.—Road construction 477
Rope splicing, three-two method of—Alex Wilson 139
Ross Construction Co..... 81
Bridge, Reed's ferry 487
Willows, California, contract 322
Rossland, B. C..... 160
Rowe, B. P—Pacific Light & Power system 288
Royal Dutch-Shell oil interests in California 255, 486
Ditto—Review of the Month.....173, 336
Operations, 1912 238
Russell-Greene-Foell Co., Los Angeles harbor boulevard bid 158
Ryan, E. G., water rights on Rush creek, and Los Angeles—Editorial..... 332

S

Sacramento, California 158
Bonds for new schools 408
Bridge 408
Bridge, American river 162, 241
Bridge, Walnut Grove 326
Levees 80, 241, 408, 491
Measuring the sewage of 300
Pumping engine, city water works... 162
State highway bids, contracts 158
State highway bids, construction proposals 157
State highway bids 489
State road surveys 405
Valley irrigation and flood control... 79
Versus Swanston estate, Brytes Bend by-pass—Editorial 250
Water supply 79
Sacramento & Woodland Railroad Co., company report 151
Sacramento Lumber & Box Co., incorporated 326

Generated on 2024-09-30 00:19 GMT / https://hdl.handle.net/2027/uiug.30112007837898
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.
Sacramento Valley Development Association, Big Valley irrigation project 244
Sacramento Valley Electric Railroad Co.. 76
And Solano Irrigated Farms Co..... 77
Bond issue 241
Organization and promotion work... 409
Stock issue 161
Woodland line 486
Sacramento Valley Irrigation Co., Irrigation project of the—R. A. Balzari 106
Salina Canyon Railroad Co., incorporated 487
Salmon, Idaho, road construction.....406
Salt Lake City, Utah.....77, 81, 242, 324, 325, 407, 409, 487, 488
Artesian water 79
Dam construction 163, 241
Highway construction 159
Increased bank capitalization 162
Industrial improvements in Utah 162
Municipal electric-power plant ..243, 326
Paving 242, 323
Paving and sewer extension..... 405
Pumping plant, sewer 326
Sewer system, new 408
State roads 490
Utah rock asphalt 78
Viaduct construction 488
Water mains 162
Water supply 76
Water system 244
Salt Lake & Alta Railroad Co., completed 487
Incorporated 324
Salt Lake & Ogden Electric, industrial improvement 162
Salt Lake & Utah Electric Railroad Co., industrial improvement 162
Officers elected 77
Salt River Valley irrigated lands, government—Editorial 414
San Anselmo Valley Railway Co., stock and bond issue 486
San Antonio Irrigating Co., enlargement or irrigation system 75
San Diego, California 76, 158
Y. M. C. A. building—E. F. Cykler... 179
San Diego & Arizona Railroad, contract to Robert Sherer & Co..... 158
San Diego & Southeastern Railroad Co., bond issue 161
San Diego Consolidated Gas & Electric Co., bond issue 159
San Diego Home Builders, Inc., water system, Angeles Heights, California 481
San Diego Home Telephone Co., note issue 481
San Diego Southeastern Railroad Co., bond issue 75
San Francisco, California.....76, 78, 159, 161, 241, 243, 244, 321, 324, 325, 488, 490
And Hetch-Hetchy—Review of the Month 254
Belt railway round-house 408
City hall 240
Construction work 79
Council of the American Institute of Quantity Surveyors—Review of the Month 256
Fort Mason reservation 162
Highway construction 405
Municipal street railroad 409
Municipal street railroad and Union Street car-line 486
Municipal street railroad, bond issue 161
Municipal street railroad, bond issue —Editorial 250
Municipal street railroad, bond issue —Review of the Month 173
Non-skid pavement—Editorial 167
Oil shipments 485
Stockton street tunnel 162
Transit facilities—Bion J. Arnold... 40
Twin Peaks tunnel 285
Wharf and dock construction—Jerome Newman 11
Wharves, new—Editorial 415
San Fraterno, oil tank steamer 157
San Jacinto, California, water-supply... 324
San Joaquin Light & Power Corporation, bond issue 160
Company report 227
Plant enlarged 75
San Jose, California, septic tank..... 162
Railways, standard gauge 324

Page.
San Jose Water Co., bond issue 78
Water rights 75
San Luis Obispo Mutual Oil Co..... 238
San Pedro, Los Angeles & Salt Lake Railway, bond issue 76
San Rafael, California 161
Bonds for municipal improvements 80, 240
San Rafael & San Anselmo Valley Railroad Co., proposed railroad..... 161
Stock and bond issue..... 409
Sandberg & Beaman, artesian well, Volmer, Idaho 163
Santa Ana reinforced concrete arch bridge—W. M. Thomas 278
Santa Barbara Gas & Electric Co., company report 151
Bond issue 160
Santa Cruz, California, Municipal water plant 78
Santa Fe Railroad Co. and Southern Pacific, rates to express companies —Review of the Month 171
Branch line, new 76
Round-house 240
Santa Maria Oilfields, Ltd., Cat Canyon oilfield 264
Holdings increased 239
Santa Monica, California, fire-protection system 81
Santa Susana district, structural geology south of the—Clarence A. Waring 470
Santa Susana Syndicate, Simi Valley oilfield, Well No. 1..... 485
Satisfactory feeder for boiler graphite... 482
Screw conveyor, capacity of..... 399
Seattle, Washington, bonds for improvements 81
Engineer's Club of—J. Thomas Dovey 286
Light and power plants 140
Railway purchase 409
Seattle, Renton & Southern Railroad..... 161
Sale to Seattle 409
Security Land Co., Stockton land purchase 324
Selah Water Users' Association, improvements 407
Serington, George, macadamizing, Napa, California 242
Sewage of Sacramento, Measuring the... 300
Sewer of 24-inch corrugated iron culvert pipe at El Paso, Texas, Outlet.. 219
Repair by means of corrugated culvert pipe 154
Shasta Valley Irrigation Association.... 244
Shattuck Edinger Co., Los Angeles roadway bid 158
Shell-Royal Dutch interests, and American Gasoline Co—Review of the Month 90
And Associated Oil Co—Review of the Month 89
In California 255, 486
Ditto—Review of the Month.....173, 336
Operations, 1912 238
Shell Transport & Trading Co., stock issue policy—Review of the Month 336
Sherer & Co., Robert, Trona Railway contract 486
Ships, American ownership of foreign—Editorial 168
Sierra Electric Power Co., Lassen National Forest—Editorial 249
Skagit Power Co., water-power site development, Washington — Review of the Month 420
Skinner, Robert P—Petroleum Products in Europe 39
Smith, Howard D—Progress in the Cat Canyon oilfield 264
Snake and Columbia rivers, Canalization of the—John H. Lewis..... 364
Solano, California 77
City harbor 325
Solano Irrigated Farms Co., water plant. 78
Solder and chloride of zinc flux..... 62
Sonoma Valley Water, Light & Power Co., bond issue 404
Sorensen, C., road, Spokane, Washington. 243
Southern California Edison Co., additional electric power on Kern national forest—Review of the Month 337
Southern California Gas Co., Los Angeles and natural gas—Review of the Month 254

Generated on 2024-09-30 00:21 GMT / https://hdl.handle.net/2027/uiug.30112007837898
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.
Natural gas, Redondo pipe-line..... 157
Southern Counties Gas Co., company report 227
Southern Pacific Railroad Co., all-steel passenger cars 324
And Santa Fe, rates to express companies—Review of the Month... 171
Attacks common-carrier law for oil pipe-lines—Review of the Month 172
Construction of San Diego & Arizona Railroad 77
Expense figures—Review of the Month 91
Extension into San Ramon valley... 76
Kern Trading & Oil Co., oil storage reservoirs 485
New expenditures—Review of the Month 7
Oakland-Alameda line, wage scale—Review of the Month 335
Strike threatened—Editorial 86
Sunset lines, strike—Review of the Month 417
Southern Sierra Power Co., and Nevada-California Power Co. 488
Speed limit for steamers, San Pedro harbor—Editorial 3
Spencer, Wm. B.—Bituminous concrete pavements 379
Spiral conveyors, formula for horse-power 229
Splicing, Three-two method of rope—Alex Wilson 139
Spokane, Washington....75, 81, 160, 161, 323, 324, 408, 409, 487, 491
Boulevard construction 406
Bridge construction 162
Grading 490
Hangman Creek bridge—Editorial... 331
Municipal improvements 326
Municipal lighting plant 408, 488
Roads 77, 158, 243
Sewer system 77
Trent viaduct 241
Versus Oregon-Washington Railroad & Navigation Co.—Review of the Month 91
Versus Spokane Gas Co., rate controversy—Review of the Month.. 174
Water mains 163
Water meters 325
Spokane Gas Co. v. Spokane, rate controversy—Review of the Month.... 174
Spokane International Railway Co., company report 227
Spokane, Portland & Seattle Railway Co., bridge construction 241, 487
Elevated street crossings 161
Spokane Valley Power Co., incorporated.. 243
Spring Valley Water Co., dam, Calaveras creek 162
Ditto—Review of the Month..... 338
Note issue 404, 481
Stack, J. W., sidewalks, Brigham City, Utah 323
Standard measuring weir, Canadian Pacific irrigation tract 149
Standard Oil Co., and Murphy Oil Co.... 485
California wells output; Fullerton field gusher 485
Common-carrier law—Review of the Month 172
Discoveries, important oil-refining—Review of the Month..... 255
Dividend 157
Gasoline from casing-head gas 332
Plant at Newhall 321
Plant enlargement—Review of the Month 90
Production and consumption figures.. 238
Rates and conditions of acceptance for oil pipe-line 239
Star Coal Co., railroad 161
State highway, California, bids 489
Construction proposals 157
Contracts 158
Progress of the 142
Steamers, speed limit for San Pedro harbor—Editorial 3
Steel and iron, Method of preventing corrosion of 387
Ducts, flow of air through..... 480
Steinmetz, Charles P.—Energy density.. 141
Stevens, Wm.—Bridge Construction, Redding, California 408
Page.
Stockton, California 324, 486, 487
Sewer system 80
Stone & Webster Corp., dam, Lake Tahoe. 241
Strange & McGuire Paving Co., paving, Pocatello, Idaho 78
Paving, Salt Lake City 406
Strehlow, Freese & Peterson 81
Strength of long-seasoned Douglas fir and redwood—Arthur C. Alvarez. 303
Stresses in plate girder spans, Calculation of—C. H. Marks..... 308
Strikes, and Newlands bill—Editorial... 86
Southern Pacific Co., Sunset lines—Review of the Month 417
Stroud, B. K.—California oil-well drilling practice 93
Structural geology south of the Santa Susana district—Clarence A. Waring 470
Suisun City, California, bridge and road work 77
Road construction 322
Sunnyvale, California, new sewers..... 325
Sunset-Midway fields, new oil wells.... 485
Sunset Monarch Oil Co., and Occidental Oil Co. 157
Surge phenomena—Editorial 413
By means of model experiments, Investigation of—W. F. Durand... 421
Surprise Valley Railway Co., incorporated 242
Sutherland oil-land protection bill—Editorial 3, 85, 168
Sutter Basin Irrigation Co., bond issue.. 78
Sutter Basin reclamation project 257
Swan, Charles S., elevated railroad, San Francisco 409

T

Tacoma, Washington, waterway bridge—John Lyle Harrington 28
Tank, oil, reinforced concrete—Edward L. Mayberry 37
Tariff bill—Review of the Month....253, 336
Tax, income—Review of the Month..... 253
A logical highway—B. G. Marshall... 315
Tehama, California, bond issue, municipal water system 244
Municipal water system 324
Texas, El Paso, Outlet sewer of 24-inch corrugated iron culvert pipe at.. 219
Thomas, W. M.—Santa Ana reinforced concrete arch bridge 278
Thompson, George—Contract for Fee dam enlargement, Fort Bidwell, California 491
Thompson Co., cast iron pipe 407
Thrall, California 160
Three-two method of rope splicing—Alex Wilson 139
Tibbetts, Fred H.—Reclamation work of the Netherlands Farm Co., Yolo Basin, California 431
Tidewater & Southern Railway Co., electric railway, Stockton and Modesto 486
Tonopah & Tidewater Railroad Co., bond issue 486
Torrance Electric Light & Power Co., bond issue 75
Transformer capacity and connection for induction-motor feeder-circuits—J. L. Moon 146
Transmission lines, Maximum loads of—H. B. Dwight 388
Transportation of materials 480
Trautschold, Reginald—Jacket-water requirements for internal-combustion engines 217
Trestle, high flume, in Idaho—A. M. Korsmo 55
Trona railroad, contract let, 39-mile line 486
Trona railway—Raymond Ashton 112
Troxel, F. W.—Road construction, Willows, California 322
Truckee Gas & Electric Co., summer shutdown 160
Truckee River General Electric Co., Eldorado National Forest water-power permit—Review of the Month 337
Tubing, National steel 233
Tujunga Water & Power Co., and Tujunga Terrace Improvement Association 481

Generated on 2024-09-30 00:18 GMT / https://hdl.handle.net/2027/uiug.30112007837898
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.

Tulare, California 161
Big Four railroad 241
Tulare County Power Co., note issue.... 311
Tularosa basin, New Mexico, Underground water in 203
Tumalo irrigation project, Oregon—Editorial 3
Tuolumne, California 75
Tuolumne Light & Power Co., power project 75
Turner Oil Co., dividend 485
Twin Falls, Idaho, North Side irrigation project 488
Wagon bridge 241
Twin Peaks tunnel, San Francisco..... 285
Twohy Bros., excavating for Oregon-Washington Railroad & Navigation Co. 323

U

Ultimate dam—John S. Eastwood..... 175
Underground water in Tularosa basin, New Mexico 203
Underwood-Simmons tariff bill—Review of the Month 253, 336
Union Oil Co. and General Petroleum Co. —Review of the Month 418
Gasoline from casing-head gas..... 332
Gross sales 485
Kerosene for Dutch East Indies..... 157
Kerosene in China 157
Plant enlarged—Review of the Month 90
United Electric Power Co., water rights. 75
United Light & Power Co., note issue.. 403, 404
United Oil Co., assessment 239
Production increase 485
United Petroleum Co., and Royal Dutch-Shell interests—Review of the Month 336
United Railroads, extension amendment defeated—Review of the Month.. 173
United States Board of Mediation and Conciliation—Editorial 86
Government permits for power development 209
Senate and currency bill—Review of the Month 417
Senate and Hetch-Hetchy—Editorial. 413
Versus Utah Power & Light Co. case —Review of the Month 419
United States Cast Iron Pipe Co..... 80
United States Steel Products Co..... 80
United Water & Power Co., and Pacific Gas & Electric Co..... 160
University of California, correspondence instruction—Editorial 3
Use and conservation of the underground reservoirs of California—Charles H. Lee 189
Utah, dairying investments 162
Irrigation projects 162
Small industries 162
Utah Conservation Co. 407
Utah Gas & Coke Co., industrial improvement 162
Utah Lake Irrigation Co. 79
Extension to system 407, 491
Salt Lake valley 325
Utah Light & Power Co., acquires new property 76
Distributing station 243
Power-line construction 326
Versus United States case—Review of the Month 419
Utah Light & Railway Co. 324
Emergency pipe-line, Ogden, Utah... 163
Industrial improvement 162
Power-plant damage 408
Utah Railway Co., Utah industrial improvement 162
Utilities, Regulation of public in Wisconsin—Halford Erickson 223

V

Vacaville, California 486
Vallejo, California, Mare Island channel. 240
State highway bonds 242
Wall, retaining, on waterfront 80
Van Ornum, S. J.—California roads..... 31
Vedder, Weldon—Colfax, Washington, city hall contracts 241

Page.

Ventura County Power Co., Oxnard water system 311
Volmer, Idaho, water 163

W

Walla Walla, Washington, bonds for paving 323
Roads 78, 242, 406
Wallace, Idaho, roads and paving.78, 243, 490
Walnut Grove, California 326
Mokelumne river 240
Waring, Clarence A.—Structural geology south of the Santa Susana district 470
Warren Construction Co., paving, Pullman, Washington.....159, 242, 406
Streets, Colfax, Washington..... 323
Washington, D. C., Iron Canyon irrigation project 491
Land restoration along Pit river, Modoc county 79
Water-power permit, Oro Electric Corporation 244
Washington and Idaho, Lewiston-Clarkston bridge—Review of the Month 174
Washington Electric Power Co., granted right-of-way through Davenport, Washington 160
Washington-Idaho Mountain Railroad... 326
Washington Power Co., Coeur d'Alene district, Idaho 75
Washington Water & Power Co., and Idaho-Washington Light & Water Co. 160
And Wilbur Electric Co. 160
Extensions 408
Water flow through weirs 480
In drilling oil wells, Kammerer method of cementing-off—Robert W. Phelps 360
In Tularosa basin, New Mexico, Underground 203
Power development, California—Editorial 249
Power permits, regulation of—Review of the Month 337
Pressure on cylindrical surfaces..... 62
Rights, power rates to corporations —Editorial 169
Watrus Construction Co., L. R., railroad construction for Star Coal Co., Salt Lake City 161
Weaverville, California, road construction, Trinity river 322
Weir, Standard measuring, Canadian Pacific irrigation tract 149
Weirs, water flow through 480
Welfare of the farmer—Editorial 333
Wells Fargo & Co. Express, earnings in California—Review of the Month 172
Rates—Review of the Month 171
Wenatchee, Washington, bridge repairing 241
Highway construction 159
Irrigation project 244
Roads 323
Street grading 490
West Kootenai Power Co., plant enlargement 160
Western Electric Co., Portola telephone exchange plant 404
Western Pacific Railroad Co., and Oakland, Antioch & Eastern—Review of the Month 418
Bond issue 76
In Sacramento 404
Wharf and dock construction, San Francisco—Jerome Newman 11, 236
And dock construction, Wood v. concrete—Jerome Newman and Norman M. Halcombe 234
Wharves, San Francisco's new—Editorial 415
Whatcom County Railroad & Light Co., mineral claims 75
Wheelwright Construction Co., emergency pipe-line, Ogden, Utah 163
Water works system, Payson, Utah.. 163
Whittier, California, water meters..... 244
Wiegle, W. B.—Combined standard drilling rig 402
Wilbur, Washington 160
Street, grading 78

Generated on 2024-09-30 00:20 GMT / https://hdl.handle.net/2027/uiug.30112007837898
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Page.
Wilbur Electric Co., and Washington Water & Power Co. 160
Williams, Alfred—Boiler-feed pumps 476
Willows, California 326
Road and bridge construction..... 81, 242, 322, 487
Trans-mountain road 489
Wilson, Alex—Three-two method of rope splicing 139
Winters, California 488
Winters Gas Co., incorporated 407
Stock issue 488
Wisconsin, Regulation of public utilities in—Halford Erickson 223
Withers & Crites, paving, Orange conty.. 322
Page.
Wood v. concrete—Norman M. Halcombe and Jerome Newman 234
Woodland, California 78, 162, 325, 407
Wright, H. T., and P. J. Haler—Practical hints on the management of small oil-engines 288

Y

Yolo Water & Power Co., Clear lake rights 325
Concrete-lined ditches 162
Y. M. C. A. building, San Diego—E. F. Cykler 179
Yreka, California 77
Yuba City, California 78
Yuma, Arizona, bridge construction 161

Generated on 2024-09-30 00:18 GMT / https://hdl.handle.net/2027/uiug.30112007837898
Public Domain, Google-digitized / http://www.hathitrust.org/access_use#pd-google
Digitized by Google
Original from UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN